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PRENTISS.

White, best quality, early, good grower, very productive, hardy, good keeper. Is a native crossing with the foreign blood. Sold wholesale in New York at 12 to 15 cents per pound. Fresh (under, sweet, cooling, crisp, with a pleasant musky aroma. Qualifies the best. Ripens with Concord.

THE

MARYLAND



FARMER:

DEVOTED TO
AGRICULTURE, HORTICULTURE,

LIVE STOCK
and RURAL ECONOMY.

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The following essay was read before the Maryland Breeders' Association, on the 14th day of February, in Baltimore city.

Swine best adapted to Economical Production and the Requirements of the Market.

BY ALEXANDER M. FULFORD.

The two branches of this subject so supplement each other that I shall not treat them separately in this short article.

One may read the report of the census for 1880, showing 47,683,951 head of hogs in the United States, which valued at only \$5 per head amounts to \$238,419,455. But there is something in the very stillness of the figures that prevents their fully impressing the reader with the vastness and financial importance of the swine interests of the country.

Go, however, into a great stock yard like that of Chicago, after reading the report of the previous day's transactions, "60,000 hogs received yesterday." See acre upon acre of living porkers, watch the stream of hogs continually pressing forward over the long, covered bridges to the numerous slaughter houses near by. Go, for instance, to that of Armour & Co., where in the height of the season, 10,000 hogs are killed and dressed in a day, besides many hundred cattle. Remember this is but one of the many packing houses in Chicago, while Cincinnati, St. Louis, Kansas City and a score of other places are daily doing the same, and then with this fresh in your mind, you will be able more fully to appreciate the signification of the figures 47,683,951, and the great value represented thereby to the farmer and the country at large.

I have purposely omitted the term *breed* of swine, in connection with this subject. In these days of improved live stock, it is not too bold to assert that the man is mistaken who thinks one breed alone is the best under all circumstances and for all purposes. Further, it is useless to name any particular breed, as you can convince but few that their favorites are not the best; but I will name *qualities*, which found in any animal or family, will at once recommend it to all breeders and farmers. From my standpoint there are, in all breeds, some animals of the highest excellence, and with few exceptions and those not of vital importance, the same principles of breeding and selection apply alike to all breeds. Myself a breeder of Berkshires, I might be pardoned were I to claim for that breed a prominence in good qualities. The friends of other breeds unintentionally but surely acknowledge it, for when speaking of their favorite variety they will tell you it is as good a grazer as the Berkshire, or it matures as early as the Berkshire, or it has as much lean meat as the Berkshire, &c.

To formulate a list of the qualities a hog of whatever breed should possess to be the best adapted to economical production, and the requirements of the market, I may place them as follows:—

1st. *Strength of Constitution.*—Without it, the loss of pigs when young will be very great, and that resulting from exposure to inclement weather and disease will be heavy.

2nd. *Activity and good grazing qualities.*—I do not mean they should, like many I have seen, be possessed of that spirit of investigation which continually impels them to insinuate themselves into a neighbor's cornfield, between the rails of his fence; or of that desire to rise in the world, which would prompt them to climb

a five rail fence to get into his pumpkin patch. These qualifications are generally the result of bad farming and bad feeding. But I consider it desirable that the hog should be sufficiently active to gather the greater part of his living during the summer season. They should "eat grass like the ox." Grass is their natural food, and besides the nourishment derived from it, it serves, I have no doubt, to separate the particles of grain food, exposing them more thoroughly to the action of the gastric juices and aiding digestion. If any one will notice how, in winter, his hogs will continue to eat the grass that has dried in their pasture, and when that is covered with snow will begin to eat the bark off the trees, I think he will find it to his interest to see that the absence of grass is supplied by the presence of hay. The activity and strength of muscle obtained by outdoor exercise will enable the hog when fat to walk off to market, and to endure with ease the hardships of railroad transportation.

3rd. *Early Maturity.*—Some will say this will depend upon how they are fed. True, in a great measure; for in this respect a hog is like a steam engine. There is a certain amount of fuel required to make steam enough to merely run the machinery; after that, all that is consumed is available for work. So with the hog—it takes a certain amount of food to keep up the animal economy, after that, all the food they can properly assimilate will go to the production of pork. I am sorry to say this point is not fully appreciated by the great majority of hog raisers. Many will keep their hogs for two years, and most of them, at least one and a half years, slowly growing to make the frame, then, when the time for killing approaches they are stuffed to repletion upon corn until fit for the market. I cannot say I approve of the method. Even though the cost per lb. for food be not greater, still, the length of time they require attention, the loss of interest on the original investment and the additional risk from loss by disease, forbid it. The latter item, in many sections of the country, is now a very important one. To give you an idea of how a pig of early maturity and economical production may gain in weight, if well and carefully fed. I will read a few extracts from my memoranda of feeding—weight is given since last weighing:—

Live weight of pig.	No. of days fed.	No. of pounds gained.	Gain per day.
			lbs. oz.
287	96	155	1 9 $\frac{3}{4}$
187	47	74	1 9 $\frac{3}{4}$
174	47	72	1 6 $\frac{1}{4}$
211	47	75	1 9 $\frac{1}{4}$
314	19	27	1 6 $\frac{3}{4}$
242	19	45	1 6
257	19	46	1 6 $\frac{1}{2}$

There are some breeds of hogs that seem to require a long period of growth before they will appear to fatten profitably for market. If my views are correct these are to be avoided.

4th. *Killing Well.*—That is, with the smallest amount of shrinkage. It is customary in many markets where hogs are purchased on the hoof, to pay for them at dead weight, allowance of 20 per cent. being made for shrinkage in killing. I have known hogs that have lost only 14 per cent. after hanging up for three days before being cut up. This was a gain of six per cent. over the usual allowance. Taking the figures of the census report, 47,683,951 to be correct, and allowing one-fourth of them to shrink as little as the animal I have mentioned, there remains 35,762,964 hogs in the United States in 1880, that would shrink 20 per cent. If these three-fourths had, by judicious breeding been brought up to the high standard of the other one-fourth, and allowing their average net weight at time of killing to be 225 lbs., the result would be a gain 482,800,014 pounds of pork, which, at 6 cents per lb. would amount to \$29,668,000. This result can be attained by proper breeding and selection, without any extra cost for feeding and attention, but rather with a saving in the cost of both.

5th. Those having the largest development of most valuable parts, and for bacon hogs, those having the largest relative proportions of lean meat. These two qualities are among the most important, and really cover the ground included in a general way under the fourth requirement, viz., that of KILLING WELL.

To more fully describe to you such an animal as I have in view when I mentioned this "development of most valuable parts." You will pardon me for speaking of some of my own herd. I do so, because I am certain of the facts, and because from having seen the animals alive, I know the results were such as a good judge might reasonably have expected. In the winter

of 1879 I butchered a pig that had been a successful show animal. He weighed, immediately before being killed, 555 pounds. Three days afterwards before being cut up his weight was 477 lbs., a loss of only 14 per cent., being a gain of 6 per cent. over the usual market allowance. Being cut up, his shoulders weighed 80 lbs., his middlings 80, his hams 105 lbs. I regret having mislaid my account, and so being unable to give the weights of the other parts, but so carefully was the weighing done, that when added up, the sum of the parts varied but a few ounces from the weight of the whole carcass.

In December last, I killed a sow 2 years and one se, en years old. The two year old sow weighed 442 lbs. gross; 373 lbs. nett., a loss of 69 lbs. or $15\frac{1}{2}$ lbs. per 100. The weights were as follows:—

	lbs.	
Head.....	29	
Leaf-lard.....	22	
Spare Ribs.....	14	
Right Shoulder.....	32	} 62
Left ".....	30	
Middlings.....	62	
Chine.....	33	
Right Ham.....	47	} 91
Left ".....	44	
Sausage.....	10	
Other Trimmings.....	45	
Feet.....	5	
	373	

The 7 year old sow weighed 500 lbs. gross; 432 lbs. nett. Loss 68 lbs. or $13\frac{5}{8}$ lbs. per 100. The weights were as follows:—

	lbs.	
Head.....	40 $\frac{1}{2}$	
Leaf-lard.....	29 $\frac{1}{2}$	
Spare Ribs.....	16	
Right Shoulder.....	42	} 82
Left ".....	40	
Middlings.....	63	
Right Ham.....	52	} 102
Left ".....	50	
Sausage.....	11 $\frac{1}{2}$	
Other Trimmings.....	59	
Chine.....	24	
Feet.....	5	
	432 $\frac{1}{2}$	

Notice the fact that the right ham and right shoulder, in both animals, weighed more than the left. The muscle or lean meat in these hogs, in proportion to the fat was remarkably developed. This was apparent to the most casual observer, even when they were in very thin flesh.

Where I have seen hogs seemingly in the same condition of flesh, have over 3 inches of fat upon their hams, these hams had from $1\frac{1}{2}$ to 2 inches. If you ask the benefit of this, I will call your attention to the fact that most persons when eating a very fat ham will cut off at least half the fat. If the ham has only about what they care to eat, there is none wasted; and if, in addition to this, its place is supplied by good, rich, tender, juicy, lean meat, how much more desirable it becomes.

I may here mention the fact that the 7 year old sow was grand-dam of both the other hogs mentioned. That I have in my herd another animal, a niece of the old sow, which has the same remarkable development of ham. I have also another family which possess it, and they both trace to a common ancestor, from whom they seem to derive it and receive the power to transmit it to their descendants. The successful concentration in these animals of valuable characteristics and their prepotent qualities would prove, if any proof were needed at this day, that the improvement of the hogs of the country from a shrinkage of 20 lbs. to the 100, to that of only 14 lbs., thus adding at 6 cents per lb., \$28,960,000 to the value of the hog crop of the United States, is within the power of our farmers, if only, they have the inclination and judgment to use the proper means to do so.

6th and last.—I will call attention to the high quality of the meat secured by compliance with the before mentioned requirements, and the admirable symmetry they will impart to the animal's appearance, not a "thing of beauty," alone, but a matter of dollars and cents to the farmer, for he well knows the difference in price as well as the ease of selling a first class, well turned, symmetrical lot of hogs.

Finally, to sum up the whole matter, I will say that the swine best adapted to economical production and the requirements of the market, are such as possess strength of constitution, activity and good grazing qualities, early maturity, little shrinkage in killing, in consequence of having the largest development of most valuable parts and the largest proportion of lean raw meat; also, high quality of meat and symmetrical proportions.

Why suffer such unspeakable tortures. Rheumatism has been conquered. Kendall's Spavin Cure is the victor. See advt.

Farm Work for April.

This month is one for active work on the farm. Every farmer who desires to have a just return for his labor during the year must now lay the foundation "As ye sow, so shall ye reap." Begin at once and commence carrying out the plans you have settled upon during your winter lucubrations, and the thoughts that have occurred to you while reading the experience and theories of others as you read in the agricultural journals during winter days. Nature is now lusty with young life and bids you warmly to come forth and sturdily bend your back to the burthen, regardless of the temporary fatigue, looking hopefully to the high reward that awaits cheerful, steady industry at the close of the year. Start right. Clear the deck for action and then "go-ahead."

Fencing and Ditching.

First, see that all the fencing and gates have been put in good order, the roads on the farm in good condition; new ditches open and blind, are in working order, and the banks of the open ones are leveled and clean of bushes and briars.

Oats and Barley.

If you have not already sown what oats or barley you intend, do so at once, and remember what is "worth doing, is worth doing well." With these grains, grass seeds are commonly sown, and hence the land should be well prepared and highly fertilized, or both grain and grass seed will have been thrown away.

Sugar Beet and Mangold Wurtzel.

If you design planting sugar beet or both, and ruta бага, manure now the ground heavily, plow deep, and before the first of May cross-plow and harrow, and give a heavy dressing of some suitable fertilizer, harrowed in. The ground will then be in a nice condition to be slightly ridged, and the seed drilled on the ridges, about the 10th of May.

Carrots and Parsnips.

If you design to raise carrots and parsnips for your stock, do not put off sowing a moment, on rich, well prepared ground, with plenty of ashes and bone dust as a manure.

Potatoes.

If you have not yet followed our advice as to planting this valuable crop or a large portion of it, see that you now plant a few acres, more or less, and follow the suggestions on this subject in our last number. There are many valuable varieties and many new sorts. Try upon a small

scale, several of the different kinds offered by the seedsmen, but plant mainly of such sorts as you have found most profitable heretofore. Some kinds will yield very large crops, but are not saleable in your markets, therefore, are of less profit than others that yield far less per acre but bring in the aggregate more money. Try various sorts, but let your main crop be of the sort that you have found would always sell at a fair price, so as to yield you a good return for your labor per acre. When by experimenting you find a better kind, then, and not 'til then, substitute it for your OLD kind. Try different modes of planting as to depth, number of eyes, distances &c. *Success lies in careful experiments.*

Corn.

You will see something about corn in these columns for this month. Note what you may read and experiment with some of the newer varieties. Prepare your land for this great crop by heavy manuring, deep plowing, and thorough pulverizing by harrow and cultivator. Half the working that corn requires should be given to the land before it is planted. This being the grand crop of the country, much interest is felt and great attention given to it by scientists and practical farmers. The old, very old ideas of corn growers seem to be now exploded as to "nubbing" seed corn. Dr. Sturtevant, a careful and learned experimenter, as well as a close, observant, practical farmer, has lately ascertained by experiment that the grains from the little end of a well-formed ear are more productive than those from any other part of the ear, and the grains from the butt end are next, while those from the middle of the ear are the least productive of them all. This upsets all the old-time practice. And he is supported by many other persons who have thus experimented. This is not conclusive, but enough to awaken farmers to go on and try experiments in this line for themselves and let their tests be made known to their fellow farmers through our columns. It is easily done, and if the old theory be wrong, we shall be much better off for its delusion having been expelled. One thing certain is, we are satisfied that the grains from the tip and butt ends are as good to plant, if not better, than those in the centre, although to the eye they appear more perfect and better. Let every farmer test this question this season with at least a few rows side by side, and again, with several rows dividing the separate tests. More will be said about this crop in our next, which will be before regular corn-planting time in the Middle States, for

we do not advocate very early planting in our locality for this crop, which is strictly a tropical plant, though it will accommodate itself to a Northern clime, under a benificent rule of Divine Providence. J. R. Dodge, the eminent statistician, says that "there is no crop in the United States, grass green and dry excepted, that equals the value of corn. It is worth 50 per cent. more than wheat and twice as much as cotton."

Stock.

Attend well to your work-beasts, horses and oxen, cows coming in should meet the necessary attention.

Calves should only go to their mothers three times a day, or what is better, raised by hand, giving them the best of feeding and attention. It will well repay. Working beasts—feed and water, and rub and brush with great punctuality and liberality.

Young pigs should have all the scum-milk they can take, given to them warmed a little, in an adjacent pen to their mother, and as they grow older add to the milk some bran or meal.

Let your ewes and lambs have the first week or ten days of this month, a run on your rye field. Take care of the young lambs, give them every chance. In feeding lambs for the early market it is less important that they come early than that they are kept growing without check from lack of food. After the lamb is ten days or two weeks old, it will usually begin to eat something besides its mother's milk. No grain is better than whole oats, placed in shallow troughs where the lambs can run and the old sheep cannot. A very little grain fed in this way will bring greater profit than if fed to any other kind of stock. The best lambs are always saleable at fancy prices.

The Roller.

There is not a more important implement in its way than the roller, and yet a good roller is rarely seen on a farm. They are now constructed so that a boy, girl or old man, too decrepid or feeble to do heavy work, can by mounting on a seat above the roller, behind a pair of horses, do as effectually a days work as can a hale man whose time is worth \$2 per day. We agree with the *American Cultivator* in its views: "A spring rolling on a field of winter grain will often, by fining the soil about its roots, save the crop; and it is equally beneficial in a similar way on grass lands. On light soils the loosening effects of frequent freezing and thawing are more or less avoided by autumn rolling. Grass land cannot be too heavily rolled. On all light lands under tillage the use of the roller is indispensable for closing the pores and preventing the evaporation

of moisture. Rolling is injurious on wet clays, except in very dry weather, when they are lumpy after plowing. Rolling a stiff soil when wet renders it more difficult of cultivation, by pressing the particles still more closely together and preventing the admission of air."

Grass, Seeds and Plaster.

If not heretofore done, as should have been done, sow grass seeds and plaster, where needed, and do not, we implore you, be niggardly mean in the application. Too many farmers think a half bushel of plaster and a half gallon of clover seed is enough. This homeopathic treatment will not do in farming, old *Jethro Tull*, to the contrary, notwithstanding.

In conclusion, let us urge you to determine at this time, the beginning of the working season, to cultivate no more land than you can work well; to manure or fertilize every acre you till; and cultivate the different crops thoroughly; look to the breeding of horses, sheep and cattle, with hogs and poultry, all of which of the best breeds you can obtain. You will then make your farming pay. We do not hesitate to say, that you need great reform, and you will continue to go behind hand until you resort to the high pressure system, and grow or raise everything on the farm that the farm needs, manure included. Breed more stock, and raise more grass to keep that stock. Consume all your corn at home, and send any you have for market not in *bags*, but on the *hoofs*.

Garden Work for April.

On the farm, so in the garden, now is the time to be stirring and active, and assiduous. Not a moment is to be lost. While you sleep the grass is growing. Prepare the whole garden by heavy manuring, if not done as advised by us last autumn and during winter. Have everything in readiness and you will feel easy in mind and be in condition to avail yourselves of the vicissitudes of the season. Of late years the vegetable garden has lost its proportions and contracted lines, and no longer relies upon the costly and doubtful efficacy of spading, but has become a miniature farm looking to the efficacious work of the plow and horse power. Therefore, endeavor to arrange your garden in such a manner as the plow and horse cultivator can be used to advantage in the culture of the respective vegetables.

Cauliflower, Cabbage, Celery Pepper, Lettuce, Tomato and Egg-plant.—Prepare a rich, nice bed and sow in drills six inches apart, plenty of

seed of each of these delicious and important vegetables, and as they grow, thin out, so as to leave them one to three inches each apart in their drills. Keep clean and well stirred the ground between the drills. This rich border will give you great satisfaction if you only will give it your attention every day for a few weeks.

Radishes.—Sow every few days to have a succession of this elegant and excellent appetizing ruit vegetable.

Okra and Early Corn.—Plant as soon as the weather is settled and pleasant.

Spinach and all Salads.—Sow seeds now and intervals of ten or fifteen days

Nasturtiums—Plant these in rich, light soil, three inches deep, and if the climbing sort, provide them in time with prongy poles or a good trellis. They are valuable. They make elegant pickles and are better to eat with mutton than the famed foreign capers.

The flowers are excellent condiments and enhance the delightfulness of a sandwich for lunch. They are more wholesome and yet as pungent as mustard or pepper. In fact, a few of the flowers mixed well with good butter and spread on good bread makes of itself a cheap but elegant and stimulating sandwich.

Melons, Squash, Cucumbers, &c.—After the middle of the month plant squash, cucumbers and some melon seed, but get the ground ready for the watermelon and canteloupe patch. Run three furrows ten feet apart, back to back, then cross with a deep furrow eight feet apart, to leave checks eight by ten feet apart; in each check put a peck or half bushel of stable manure, whitened with plaster, and let it so stand until ready to plant. When you determine to plant make hills at each check, intermixing the manure, and add a half gill of leached ashes. The hills should be broad and flat, and raised six inches above the level of the ground. Then put in ten or twelve seeds and thin down as they grow, to two or three to a hill. Canteloupe may be planted four by ten, or if in a separate patch, six feet each way. These delicious earth fruits ought to be grown in great quantities, they are so good for the health, comfort and luxury of the children, and the friend and the "stranger within your gates." A fine melon or canteloupe is a rich repast for breakfast, dinner or supper. Each represent the gigantic proportions of America and her superb productions.

Strawberry Beds.—If not already done, clear them from all weeds or grass, work well, manure if it be necessary, and mulch with straw, leaves, corn stalks, tobacco stalks, or place oyster shells

so that the ground will be shaded, the grass and weeds will be estopped from growing, and the fruit protected from dirt and grit. All these important matters will be accomplished by a few hours work at this time. If this month be very dry, give your beds once a week, a soaking watering.

Onions, Medicinal and Culinary Herbs.—Sow the seed, or set out the plants or bulbs of all these necessary appendages to good cooking and health. The Lavender is excellent in various sicknesses, in various dishes and drinks, and a delightful perfume when put amongst the house linen. None of these easily cultivated plants but what are of great value at times, and are too often neglected by our most thrifty housekeepers.

Peas and Beans.—Continue to sow every week or fortnight, a few rows of peas and string beans for a succession. Among the many varieties found, you cannot well go astray, but we mention for early, Tom Thumb, Bliss American Wonder, Daniel O'Rourke, the Little Gem; and for later and late, the Marrows, and the greatest pea of all, the Champion of England, which may be sown at once, and afterwards at intervals. Those sown now will come in bearing just as the very early sorts are retiring. String or dwarf beans are tender and cannot withstand frost, therefore plant only when the earth is dry and warm. The Early Valentine is good to begin with, but the best are the Black Wax or the Ivory Pod Wax, or any of the Wax varieties.

Carrots, Parsnips, Beets and Salsify—Sow seeds of all on rich land, where plenty of ashes have been used, or give a dressing of fine bone dust. Pour hot water on the seeds and let them soak for twenty-four hours before planting then dry or rub them in ashes or plaster.

Potatoes.—Set out a bed of potatoes and see that they have all the manure, ashes, &c., they may want for food, and if so, they will yield a heavy crop of nutritious, delightful food, for your family or the public.

Gooseberries and other small fruits.—These should have been attended to before, but if neglected, at once set to work, make new plantations, trim the bushes, cut out all the old wood, thin the new, dig about them, and give them a mulch of rich, but coarse stable manure.

Dwarf Trees—Trim, prune and plant out new ones. You cannot have too many, keep the ground light and clean in your dwarf fruit orchard, and mulch the trees heavily with grass or straw, and do not believe in the lazy doctrine that they do well if left in the grass and weeds.

Asparagus.—Set out a full supply. Year by

year, and deservedly, asparagus is growing in general estimation, for it is not only one of the wholesomest and daintiest of vegetables, but the very earliest. It is the most easily raised, too, for it requires but one planting to serve a lifetime, never failing or ceasing to yield its crop unless actually destroyed by main force of maltreatment.

Grafting.—As the time for grafting approaches it should be remembered that the only secret of success is in carefully adjusting the scion to the stock, so that the flow of sap from the latter to the former will receive as little check as possible. Wax is useful mainly to exclude air while nature cements the new wood with the old. This will require only a few days if the work has been well done, but it is important that the buds on the graft should be dormant. Evaporation from the bursting leaves is very rapid in warm spring days, and if not sustained by fresh supplies of sap the leaf soon withers. Hence the graft should be cut before any warm weather, and is all the better for being set as soon as danger from freezing is over. With cherry trees early grafting is imperative if success is to be insured.

The Lawn.—Nothing is more attractive about a dwelling, than a well kept lawn, proportionate to the size of the house, and after the lawn is made smooth, level and well set with grass, nothing contributes so much to its beauty, or so cheaply done, as a frequent use of the lawn-



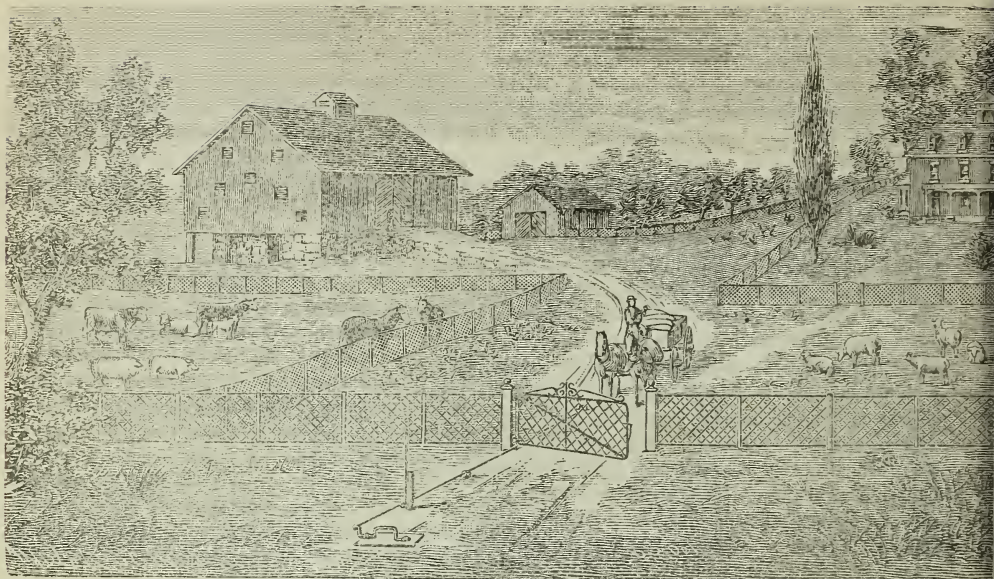
mower, a cut of which is given in the above neat picture. This cut represents the lately improved PENNSYLVANIA LAWN MOWER, which has the new pawl that does away with springs of any kind and also makes it almost noiseless. A new clamp attached to the shaft makes it impossible for the clamp to slide on the shaft. With these improvements experience has failed to develop where any further improvements could be desired.

A Good Pasture.

The value of a pasture consists, first, in a close, strong sward. To have this the soil must be firm, fertile and filled with moisture. By this we do not mean that it shall be wet; on the contrary it must be the reverse. The moisture must be such as is held naturally; not the moisture of saturation, but that of vaporization. Thus, a permanent pasture should never be heavily cropped until it is well set. Hence, none of the tuberous rooted grasses, like timothy, are suitable to permanent pastures. They cannot stand close cropping nor constant tramping. Pasture grasses therefore, must be the fibrous and deeper rooted varieties. Again, pasture grasses must be those which will give an abundance of leaves from early in the spring until late in the autumn, and that will spring quickly after being cropped, when moisture is abundant.—*Breeders' Gazette*.

Growing Hybrid Tobacco.

A variety of tobacco has lately come into use which is called "hybrid" tobacco. It is a cross between seed leaf and Havana, and produces leaves of smallish size, but of excellent quality. The plants are set out nearer together in the field than is usual with seed leaf varieties, and in that way the yield of the hybrid falls little, if any, below that of the seed leaf. The usual distance for setting the plants is about 16 inches in the row, and the rows three feet apart, the actual growth of the plants upright, thus allowing easy working of the crop. The area in Chemung county, devoted to this tobacco this season scarcely exceeded 30 acres, but the rapid sale of the crop and the favorable prices received by the growers, has awakened some enthusiasm among tobacco farmers, and as the result, probably nearly the entire acreage planted with tobacco next season will be of this variety. The prices at which the tobacco has sold that was grown in the valley, range from 20 to 23 cents per pound, and with yields per acre varying from 1,500 to 2,000 pounds per acre, the profits are large. The labor of caring for the crop is little in excess of that required for seed-leaf varieties whose spreading growth makes the manipulation of the plants difficult and expensive.—*Ex*.



Sedgwick's Steel Wire Fence.

We give above a pretty picture, showing how the Sedgwick Wire fence looks when properly placed on the grounds of a well kept rural home. Each year the question of the cheapest, and at the same time, the most durable and effective fence becomes more prominent. The firm of Sedgwick Bros. invented machinery by which wire can be rapidly made into a double twist net-work of diamond shaped mesh. This is conceded by all to be the most scientific and economical manner in which steel or iron can be used to insure the greatest strength and durability. The Sedgwick Steel Wire Fence is a net work without barbs; it will keep out small pigs as well as the most vicious stock. It shelters no enemies to crops or poultry, makes no shade, accumulates no snow drifts. It is just the fence for gardeners, and is very desirable for lawns, parks and cemeteries. Also excellent for grape arbors, trellises, flower beds and various ornamental purposes.

Being dipped in rust-proof paint it is

very durable and is better than board fence in every respect. It is not affected by heat or cold owing to its peculiar construction, allowing contraction and taking up all expansion. Sheep husbandmen favor it, because it is absolute *protection against dogs and wolves*. Pigs and poultry are restrained better than by any other fence. Wire net work is no new thing, but they have, by the use of machinery, reduced the cost until it is within the reach of farmers.

This fencing as its name implies, is made of the best annealed steel wire. The margin wires, *i. e.* top and bottom wires, run nearly straight, and are No. 8 or No. 9, which is common sized telegraph wire. The body wires are No. 13. The breaking strain of No. 9 is about 2,500 pounds, and of No. 13 about 800 pounds.

No single wire is expected to break with less than 800 pounds strain, and the wire will break before the twist will slip. The above figures show this is a strong stock fence. Orders for the above fencing wire will be received at the office of the MARYLAND FARMER where samples can be seen. Also see advertisement in this number.

Ensilage.

The Second Ensilage Congress was held in New York, on January 24th and 25th, 1883, and the proceedings have been published in a neat pamphlet by the New York Plow Co., to whom we are indebted for a copy. There was a good attendance and many samples of ensilaged materials were exhibited. The discussions were interesting and the result of the deliberations were confirmatory of the great usefulness of ensilage in feeding stock, particularly for dairy purposes, and the fact of its cheapness in preserving the juices of the grasses in their almost pristine greenness and succulency. We have room for only a few extracts from the remarks of Col. J. W. Walcott, of Blue Hill Farm, Readville, Mass., and a reply of Mr. Morriss, of Md., to a question. Col. Walcott has had much experience with silos and is one of the most noted dairymen in this country. In the course of his remarks, Col. W. said:

"You will remember I told you last year that my crop of corn in 1881, from thirty-four acres, was in round numbers 461 tons or an average of nearly 14 tons to each acre. The year 1882, gave me 462 tons of corn on twenty-seven acres of the same land, or nearly 18 tons per acre—a handsome gain upon previous years. You will not forget that I harvested from this same land, June 1, 1882, a fine crop of winter rye which, as already stated, was fed from the silo in mid-summer; you will also bear in mind that the same land is now again in rye and wheat to be ensilaged in May or June, for next summer's feed. Thus, by raising a winter crop as well as a summer one from the same land, I succeed in raising about 24 tons per acre, annually, a quantity sufficient to support, the year round, rather more than two full grown cows on each acre planted. It is, I believe, agreed by feeders of ensilage, that sixty pounds a day, or that 1800 pounds a month is a full average ration for mature cows.

"In raising the crops mentioned, I have found that the land was in better condition each year, and that each succeeding crop was in most instances superior in quantity

to the preceding one. This condition of affairs, is to say the least, encouraging. How much farther it can be carried time will divulge, but I have faith in a still greater improvement.

"If two tons of well preserved ensilage is equal in feeding value to one ton of best English hay, and I do not doubt that it is, then figures are not necessary to convince you how much more profitable your pasture lands will be, if plowed and sowed to ensilage crops than if in grass. Should the crop of ensilage be but the moderate one of 12 tons per acre, you would find that each acre would support a cow the whole year, while at present, it takes on an average, four acres to provide feed for one cow in the summer, and two acres of grass hay for winter; six acres against one! This, of course, refers to such pastures as can be cultivated; There are many acres of pasture land which cannot be plowed, and these in my opinion, would be more profitable if allowed to grow up to wood, and a portion of the land now in grass to be devoted to ensilage crops.

"The size of silos is a matter to which I will devote a passing word. My two silos when first built, were each 50 feet in length, 15 feet in width, and 20 feet in depth, each of these have since been divided into three compartments, giving to each a capacity of 4,800 cubic feet, or, reckoning 44 cubic feet to a ton, of a little more than 110 tons.

Q. How much pressure do you use?

Col. Wolcott. About 130 pounds to the square foot; I think that is more than is necessary, but would rather err on that side.

Q. Where do you begin to take the ensilage from the silo, and do you remove the weights for the purpose?

Col. Wolcott. The entrance to my silo is at one end and near the bottom, I cut it down, vertically, one or two feet at a time, and do not remove the weight from any of it until I cut it down for use. If you wish to keep it well, *don't remove the weight*.

Mr. Morris, of Maryland, said in reply to the question—Do you use the same silo two years?

"Yes; I have a silo that I used for six or seven years. It is one of these earth silos. They make the best silo. You can keep apples in an earth silo, with other vegetables, and they will be good to eat

and will not taste of the earth or vegetables. The silo will not freeze if there is no water. I never had the ensilage in a silo freeze with the thermometer below zero; I examined the ensilage carefully. I always cut the corn in tassel before the ear is formed. I never let it stand until the ear is glazed over. We used Southern white, and also Southern yellow corn. It doesn't make any difference. I advise those who have small farms to put up small silos of this kind. It is a want of knowledge when there is not a silo on every farm. This is the greatest improvement in agriculture that has ever been made. If the farmers cannot buy a cutter, they may have one go round from farm to farm and do the work."

In connection with this subject we give the following from H. C. M., a correspondent in the *Country Gentleman*.

"At the University of Wisconsin an experiment was made with a wooden silo, built in a side hill at a cost of \$18, being built of old lumber of which no account was made. Thirteen rows of corn were cut September 6th, and put into the silo making 21,000 pounds of ensilage.

The same number of rows of corn were cut and shocked. In November and December, four new milch cows were selected. Two of them were fed on ensilage for 21 days and the other two on the dried fodder, which had been under cover since it was well cured. At the end of 21 days the cows were changed, and those fed on ensilage before were now fed fodder, and *vice versa*. During this test each cow, whether on ensilage or fodder, was fed one pound of corn meal, one pound of wheat bran, and one and one-half pounds of oil meal at each feed, morning and evening.

The result was that the ensilage plus the ground feed produced 1456½ lbs. of milk, from which were churned 59 pounds 8½ ounces of butter. The fodder plus the ground feed produced 1322 pounds 15 ounces of milk, from which were churned 53 pounds 3½ ounces of butter.

Each cow had all the ensilage or fodder she could eat up clean.

The cows were fed, watered and milked at the same hour each day, and every means taken to make the test complete and fair. The test continued 42 days. At

the rate the food was consumed, the 13 rows of corn fodder would have lasted 48 days, while the 13 rows made into ensilage would have lasted 67½ days.

For the Maryland Farmer.

Pulverizing the Soil.

The solid portions of our earth are composed of simple elements, among which are to be found those, which by various combinations, constitute the substances of fertility. The reduction to the disintegrated parts of the solid portions or rock produces the soil, which takes the same nature, so far as the elemental principles are concerned, as the rock itself.

In the early history of the globe, it presented only a rock or hardened surface, which was occupied by no plant life until fitted for the same by the action of atmospheric and aqueous agencies, whereby there was afforded a sufficient means of sustaining plant life in its lowest form, which by its decay and combination with the mineral elements, added the vegetable matter necessary for a more advanced condition of growth.

It is not the province of this article to discuss all of the possible conditions that might have existed and been necessary to form the present earth deposit which this globe sustains; it is enough to know that the fact exists, and that is sufficient for the purpose of this article.

That the earth exclusive of a very small proportion of vegetable matter, is nothing more or less than disintegrated rock cannot be denied, and yet no one would think of attempting the cultivation of crops upon a rocky surface, even with the aid of the entire amount of vegetable matter to be found in the average soil. Now why is this so, when all the mineral elements exist in their completeness? The answer readily appears, and is found in the fact that these elements are not in a condition to be available as plant food. Whatever of mineral substances enters into plant structure, does so in the fluid state, or in a state of solution. But a rock may be immersed in water and yet not rendered soluble, nor will it to any great extent even by the addition of acids. Therefore, the condition is natural that mineral substances are soluble according to the minute division of their parts.

This being admitted, another very natural conclusion is, that the fertility of soils depends upon the amount of soluble matter that it is capable of affording; but, solubility depends upon the minuteness of the particles of the soil—therefore, fertility depends upon the minute disintegration of the soil.

Having proven the necessity for a pulverization of the soil, it remains to consider how this is to be accomplished. One of the methods adopted to partially affect this, is plowing. With soils of a naturally light and sandy character, this course is sufficient, since no amount of labor with ordinary farm implements, will, after plowing, very much affect the texture of such soils; therefore manipulation must be confined to soils of a different character—such as are fine in texture and whose particles are inclined to adhere. There are soils that are very adhesive in their character, and the coherence of their particles is very great. To overcome these tendencies is the object of all efforts at pulverization.

After plowing, one of the methods usually employed is to make free use of the harrow, of which there are very many very highly recommended, the mention of any particular one of which will be avoided, lest it have the appearance of some pecuniary interest connected therewith.

It will be enough to know, that the implement or machine of whatever style of manufacture, is capable of performing the service required in the best manner.

Another method is sometimes employed to follow or in connection with the use of the harrow or pulverizing machine, being a very cheap device that any farmer can easily manufacture, and that is a bush to be dragged over the plowed field; oftentimes the use of this, with a toothed harrow riding the same answers a very useful purpose, especially in preparing for immediate use on over-turned sod.

Where the soil is inclined to be lumpy to such an extent as to resist the action of other implements in efforts toward reduction, the roller may be advantageously used, followed by some sort of harrow, persons who have been accustomed to the cultivation of the soil, cannot have failed to observe, that in all cases, those crops that have received the most attention, *i. e.* where the soil has been most frequently stirred, are the best; the reason for this is

that the soil is better pulverized; no tenacious soil can be continually stirred without becoming pulverized; and now, if observation proves these facts, is it not for the interest of the farmer to put forth efforts in this direction, to the end that his crops may be increased, and so, he thereby be advanced in material prosperity.

Columbia, Conn. WM. H. YEOMANS.

For the Maryland Farmer.

Common Schools of Maryland, with a Suggestion.

In response to your request for an article from my pen, for the MARYLAND FARMER, I beg leave to say that I find myself in my old days, when I am no longer able personally to supervise and direct the plow and the reaper, in charge, with my two respected colleagues, Messrs. White and Renshaw, of the public schools of Montgomery.

These schools, nearly 100 in number, pervade the whole county. They are organized under the public school law of the State, which requires that the counties shall be laid off into school districts of not more than four miles square, and that a school-house shall be built, as near as may be, in the centre of each school district, so that it can with truth be said, that neither poverty nor distance can be pleaded as an excuse for ignorance and illiteracy in Maryland.

These schools are supported by a direct tax of 10 cents upon every \$100 worth of property; by the dividend from the Washington branch of the Baltimore and Ohio Railroad, by the interest arising from the investment of the surplus money received several years ago from the general Government, and one or two other sources from the State, and if this is found to be insufficient to pay the salaries of the teachers—the several Boards of County Commissioners are empowered and *required* to levy an additional 10 cents, or more if necessary, and they can be induced to levy the additional sum to run the schools for 10 months of the year.

In Montgomery, the county levy, in addition to the fund received promptly every quarter from the Comptroller, amounts to near 20 per cent. or one-fifth of the whole county levy. With the school house al-

most at every man's door or within very easy reach and with so liberal a fund for their support, illiteracy is a thing that ought no longer to be heard of in the State. Yet the census tells us that there are 50,000 illiterate voters in Maryland, enough to turn the scale in any election, which fact shows that our appeals to the virtue and intelligence of the people have a very insecure basis for the support of republican institutions.

It is charged that this amount of illiteracy is mainly due to the character of the studies introduced and pressed upon the pupils in our public schools, known as the "higher branches" of study, the effect of which is to give a light and airy polish, to the neglect of those solid branches which experience has proved to be necessary for good citizenship and the business relations of everyday life. For these latter objects free schools were established and endowed by the State. To bring them back to their legitimate functions, and to relieve them from the charge above stated, I have elsewhere proposed that for this class of higher studies, we should introduce in connection with the study of geography, which is one of the required studies, the Elements of Agriculture.

Something about the *productions* as well as the boundaries and location of States and empires, it strikes me would attract and interest the minds of children and impress localities, where the mere dry memorizing of the lesson would fail to produce any lasting effect, curiosity would also be excited and a desire to see and possess objects of animal and vegetable growth, unknown in our climate. How to obtain them would be the question. To raise and send something, the product of our climate and unknown abroad, and not produced by them, would be the natural solution. This would teach, (1st) the art of cultivation; (2nd,) the art of barter, both practical lessons of great importance.

Thus would follow useful lessons, and such as would endear home, the country and its surroundings to the youthful heart and mind. This, of itself would be a strong argument in favor of the plan, for the tendency has of late been too much to the cities, where disappointment is soon followed by habits of vice, idleness and debauchery. To reform this tendency, the public schools can, and I think, ought to

be made an important agent and factor. But as long as we continue to give prominence to the higher and ornamental branches, just so long will there be fostered a disposition for the display of the ornamental, and the honest lessons of solid learning and practical usefulness be neglected and ignored. More especially, in view of the amount of illiteracy which the census charges us with, should ornament be postponed, until every person shall know how to read his own ballot and make out a bill of wages for his every six days work.

A. B. DAVIS.

For the Maryland Farmer,

THE APIARY.

Comb Honey — How to Produce. Care for and Market it.

BY C. H. LAKE.

[Continued from page 82, March number.]

The "Perfection box" remedies this loss to the bee-keeper; swarming is prevented almost totally, and the honey is sure to come. To work the box, we manage in this way: In *building up* in the spring every populous colony is marked, either in the apiary record, which every bee-keeper should keep, or by a mark put upon the hive, but the best plan is the record. This can be looked over in the evening and the very condition and requirements of each hive is before you. On a stormy day when you could not be noting the marks upon the hives, you could look over the record and make the time count by preparing for this hive or that, which might perchance be overlooked if you relied on your hive marks. Friend Newman, of the *American Bee Journal*, Chicago, Ill., has devised an excellent form for a register, and offers them at such reasonable rates, that every person keeping bees should possess one, while this register is not strictly a *working* record, by which our method is carried out, it is essential and we have adapted and use it.

In making a working record, first commence and number all the hives from one, upwards, number each page of record, and write all the wants of the corresponding hive. As an illustration I will give an extract from one of our pages: "21 page;

Jan. 1, very strong; remove division board, *give comb* and box at once." This implies that swarm, or hive 21, is very populous, and that a division board used in contracting the chamber is still in place, but that a brood comb is required in its place, and the first surplus honey-box is to be given them. June 3rd, is this entry: "Give another box." This indicates the bees are at work in the first box and require another. June 10th: "Boxes filled—raise at once," which tells us we must give more room or the bees will swarm, which is done by simply raising up one or more of the filled boxes and putting an empty one underneath. It will not do to trust to memory in those matters unless you are working but a few hives. The hives being all ready, we commence giving each strong colony one box directly over the brood, whether it be at the end or in the middle of hive (in most cases the swarms commence work in the middle) beside the box; we place the covers of the other two boxes which makes all snug. The bees finding this small place directly above their brood and the frames all filled with nice 'starters' and warm from the ascending heat, are not long in discovering the new situation of affairs, and in many instances I have seen the box packed to the utmost in twenty minutes after being given them. Just as soon as they are well to work, slip a honey knife or spatular under the ends of the box to loosen the attachments, and move it either to the front or rear, care being taken to keep it over the beds below, and place an empty one where it stood across the centre of hive. As soon as this is well at work, move again and apply the third one. Don't wait till the bees 'seal the honey,' but just as soon as you find the combs full, which readily can be seen through the observing glass at ends of the box, raise it up and give an empty one underneath. In a few days another will want the same treatment, and so on till, in many instances, twenty or more of these Perfection boxes will be on the hive filled with "nature's sweets." In raising the boxes before being sealed, much lost time can be saved to the bees, besides swarming prevented. After the combs are filled, then the evaporating process must continue till the honey is ripe to be sealed, and the bees having no other place to store the honey, will crowd it into the brood chamber, and thus force out the

swarm, premature. If the boxes are simply raised up, the heat ascending all the time will ripen the honey, while at the same time the bees have just room enough to keep them well occupied below, and the queen not deprived of her room in the brood nest, while many pounds will be stored that would be lost to the bee-keeper should he wait for the 'sealing up' to take place.

Another strong argument in favor of this box is the fact that early in spring when the fruit trees come into blossom, some of the most luscious nectar can be secured that would otherwise be stored in the brood nest and consumed in brood rearing. On several occasions I have had surplus honey from the peach blossom. Again, by removing the boxes at the close of each particular honey flow, the various kinds of honey can be kept separate, and if the hives are stripped of all their boxes just at the commencement of white clover and new ones put on, you will have the satisfaction of seeing a prime crop of honey come off at its close. All unfinished sections be uncapped, and the honey extracted, and the combs put away for another season's use, the honey can be fed to the bees in the autumn for their winter stores, and you will have no 'second grade' honey to put on the market.

The next important feature connected in securing comb honey, is a good *honey room* to store it in. It is no easy task to look after a lot of comb honey after it has been removed from the hives unless you have every appliance needed for its protection. If left on the hives, the bees would soil it in running over it and make it unsightly, and thieves (two legged ones) might take a notion to help themselves. The failure of the flowers to secrete honey after the white clover flow, would cause the bees to remove some of it to their brood chamber, and it is no unfrequent occurrence that the brood chamber is *packed to the utmost* or 'honey bound' by allowing the crop to remain on the hives till near autumn. 'Tis best, therefore, to remove it from the hives as fast as capped over. A warm, tight, dark and dry room above ground is the very best place to keep the honey. A very good arrangement (and I have never seen a better) is thus prepared: Take any room sufficiently large enough to meet your requirements—a room in some out-

building; a chamber in the house, one with out windows would not be objectionable—make it thoroughly tight. Take pine lumber 1 inch thick, 6 inches wide, and cut as many uprights as the space occupied will require, setting them four feet apart around the room. A room 16 feet long would require five on each side. To these uprights are firmly nailed the supports for the honey bars to rest on, and three little blocks to keep them apart regularly. These are nailed every seven inches, or the distance can be more or less according to the section frame in use, but seven inches will accommodate most sections now in use. The honey-bars are made of nice tough lumber and are nearly 4 feet long by 1½ x 1 inch, and are cut so they will just drop into the spaces made ready to receive them. A room 16 feet long by 8 feet wide and 8 feet high, would hold a rack on either side with four sections, seven pair of comb-bars, each capable of holding at least 20 sections to a bar or 140 sections of honey to each section of the rack, and allowing 8 inches clear room between each row of section or 560 sections to each side.

A centre row could be arranged that would hold twice the number that could be got on the side, and allow of ample space to carry in and out the honey. On the floor underneath the racks is ample storage space for packing boxes, shipping crates, and other material that accumulates about a honey house. About 2 feet 6 inches from the floor, at every alternate section, a "dropleaf" is arranged to set the honey trays on, while removing the filled sections to and from the honey bars. When not in use they are dropped down, to be out of the way in passing by. As the sections are removed from the hives they are cleaned of the propolis and such bits of comb the bees are sure to attach to them, and then taken on the trays to the store-room, and placed upon the section bars. If, at the end of about ten days, any appearance of the moth is seen, the room is treated to a sulphur match, made by dipping a cotton rag in melted sulphur, and after rolling up loosely, is ready for use. The fumes of one of these prepared matches usually answer the purpose to destroy all eggs of the moth, and what worms that may be hatched. If any more are seen a few days later, another match is lighted and the room closed to prevent escape of

the gas. The second application usually secures the honey from any further attack, and the honey is removed from the racks, packed in the shipping cases and got ready for the market. The racks are again refilled and treated in the same manner. Sometimes the honey is not well ripened and will sour and burst through the cappings and run out, soiling everything beneath it. This is remedied at a slight expense by having trays made of common tin, containing a small wooden rack on which the sections stand. The tray catches all drips and they can be readily set out of doors, where their contents will soon vanish. Everything can be kept clean and neat when these trays are used in connection with the racks, and they can be made at a cost not exceeding ten cents each accommodate ten sections at a time.

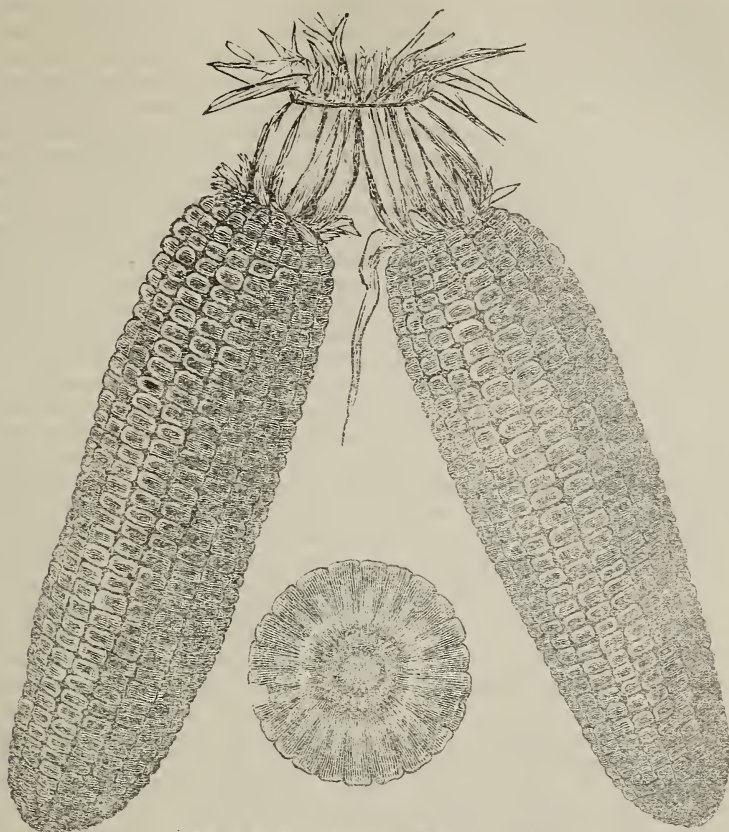
[To be continued.]

MARYLAND FARMS ADVANCING IN PRICE.—Mr. Gabriel Christy has sold his farm of 253 acres, situated on the road leading from Aberdeen to Perrymansville, to Mr. James W. Wells, of Aberdeen, for \$15,000. It was formerly a portion of the late Edward Griffith's property.

—THE Dr. Evans farm, near Port Deposit, containing 237½ acres, owned by Wm. B. Steele, was recently sold to the Messrs. Kimble, for \$90 per acre, or \$21,375. A year ago Mr. Steele gave \$14,500 for it.

TOBACCO PREMIUMS OFFERED BY THE SCOTT TOBACCO ASSOCIATION, GEORGETOWN, KY.—For the best sample of five pounds, cutting leaf, White Burley tobacco, raised in the United States in the year 1883. None but members can compete. One dollar is cost of membership. For particulars address Frank M. Snavelly, Secretary, Georgetown, Ky.

Ashland, Pa., June 3, 1880.—A case of spavin that came under my observation was entirely cured by one bottle of Kendall's Spavin Cure, and the horse sold afterwards for two hundred dollars. Yours truly, C. H. BARNARD.



THE IMPROVED LEAMING CORN.

Reduced in size from a Photograph.

HORTICULTURAL.

CORN.

This month is the one in which the chief preparation of land for the corn crop ought to be made; fertilizers got ready and the seed corn procured; hence we here give descriptions of a few of the leading sorts now commanding attention of corn growers and suggest that our friends procure a half bushel, more or less, of one or all of the varieties here named and described, that they may experiment with them, and also with the theories of Dr. Sturtevant and others.

For the use of the accompanying illustration, we are indebted to Messrs. John-

son & Stokes, the enterprising seedsmen of Philadelphia. See their advertisement in this Journal. We have also received a sample bag of this excellent corn which can be seen by planters at our office, and orders received for it.

The Leaming corn was first brought to public notice at the Paris Exhibition, in 1878, where it received the highest award over all other varieties of yellow field corn, since which time it has been thoroughly tested by many farmers with the greatest success. It has been undertaken to improve this variety by a careful selection of the earliest and most perfect ears for seeds.

Advantages of the improved Leaming corn over all other varieties.

1. It is an extra early, and not a hard, flinty corn, but sweet and nutritious, making excellent feed and the finest meal, its

quality not being surpassed by any other known variety. These facts alone will be highly appreciated by farmers in extreme northern latitudes where other varieties will not ripen.

2. The ears are large and handsome, with very deep, large grain, of deep orange color, and small red cob, the cob being the smallest in comparison with the size of the ear, of any variety in cultivation.

3. The stalks grow to medium size (not large) with few suckers, tapering gradually from root to top, producing two good ears to each stalk, and husks and shells easily.

4. Its great productiveness, 136 bushels to the acre on good corn ground, with good but no extra cultivation, was grown last season by actual measurement.

5. It is adapted to a greater variety of soils than other varieties, producing unusually well on light or heavy land, where other varieties would not thrive.

There are other varieties now before the public with strong claims to attention. Among the many we select a few that we find described in our exchanges, and some of them it would be desirable for our farmers to procure and test.

Chester County Mammoth.—Yellow Dent 14 to 24 rows, Middle and South. Ears large and well formed, varying in size, frequently over 14 inches in length. Kernels long and narrow, closely set upon the cob; of a bright yellow color. This is one of the most prolific of the large Dent varieties; it is said to have produced 150 bushels of shelled corn per acre. It will not mature in the extreme North, but is well adapted to latitudes south of Central Illinois. Originated in Chester county, Pa., where it has stood the test of 18 years.

Blount's Prolific.—White, half Dent, 8 to 10 rowed. Middle and South. Originated by A. E. Blount, in Tennessee, who bred it especially to develop the tendency to produce several ears on each stalk. The result is that usually two, frequently six and even eight ears are produced on a single stalk. The ears are about 8 or 9 inches long, 8 to 10 rowed, uniform in shape. Kernel white, hard, as broad as long, closely packed on the cob in straight rows. With careful selection through a series of years, this variety gives promise that it would become the most prolific Indian corn in cultivation. It will not ripen in the extreme

North, and is adapted only to the Middle and Southern latitudes. Stalks above the average height, and they sucker freely, hence the plant is well adapted for ensilage or grain fodder purposes in any climate.

Wauashakum Corn.—Yellow Flint, 8 rowed. North. This is undoubtedly the most strictly pedigree variety of Indian corn. Originated by Dr. E. L. Sturtevant, upon Wauashakum Farm, Massachusetts, by careful selection and skillful breeding from selected stock since, 1874. The ear is perfect in shape, about 9 inches long, 8 rowed, about 45 kernels to the row, rows straight and even, full from tip to stem; same diameter at both ends. The kernels are very compactly set upon the very small cob and are flinty, dense and heavy; weight 64 pounds per bushel. The careful breeding and cultivation of this corn on rather poor soil, has given it great hardness, power to withstand drouth, and great yielding capacity on good soils. It often yields 100 bushels and has gone as high as 123 bushels of shelled corn per acre; the ordinary average yield is about 80 bushels per acre. The stalks are below the average in height and size, but above the average size of flint corns. Nearly every stalk bears an ear, and often 2 and 3 ears. The small stalks permit thicker planting than larger stalked varieties, which is one reason for its great producing capacity. These characteristics are more fixed by careful breeding than those of any other Indian corn.

Maryland Prolific.—White Dent. Middle and South. Ears 9 inches long and upwards 2½ to 2½ inches in diameter, slightly tapering, well filled at both ends. Cob medium size, white. This is an improvement by selection from the ordinary Horse Tooth variety of the south. Kernel ½ in. long, narrow and thin, hard, white and glossy, closely set upon the cob. A popular variety in Maryland and Virginia. Adapted to middle and southern sections. "In 1880, a field of 50 acres of moderate fertility, in Maryland, averaged 60 bushels per acre. The grain is recommended for either hominy or meal. Being of large and profuse growth, it is suitable for ensilage purposes."

Horse Tooth, (Southern White.)—White Dent. South. This is the original type of the large-eared, white, Dent varieties. The ears are 10 inches and upward in length, 2½ in diameter, and nominally 16

rowed, but varying from 14 to 32. The kernels are $\frac{1}{2}$ inch long, broad and thick, rather soft in texture. The cob is large; color, both red and white. This variety is extensively grown in the South and is well adapted for ensilage and green fodder for the North, the stalks being large, tall and leafy, often 12 feet high and upwards. It is not very prolific except where improved by selection. Producing but one ear per stalk, sometimes two. The necessity of planting the hills so far apart in the South makes light crops.

Little Red Cob.—White Dent, 18 rowed. South. Ears 7 to 9 inches long, $2\frac{1}{2}$ inches through. Cob small and pale red in color. Kernels white, $\frac{3}{8}$ of an inch long, thick and narrow, quite hard and heavy. Stalks 6 feet high, by $1\frac{1}{2}$ inches through, very leafy and yield a large amount of fodder. This variety originated and is largely cultivated in Georgia and has matured in Southern New York. In Georgia, when planted March 1st to 15th, matures August 1. It is an excellent stock corn, producing very handsome ears, and adapted to the lower middle and southern sections of all corn-growing countries.

The *Rural New Yorker* has also a "thoroughbred prize corn," of which it has published a cut of one ear full size. This corn is remarkable for the length of ear. The one above referred to measured *17 inches long*. The *Rural New Yorker* says of this corn:

"We have many ears measuring 15 inches, which are thoroughly dry—several that measure 16 inches. Few of these are perfectly filled out, probably because they were grown in small plots and imperfectly fertilized. The history of this remarkable strain of Indian corn is well known to our older readers. Along the Atlantic coast of Long Island it has been raised in meadows far away from other corn fields for over 40 successive years. During all this time the longest ears alone have been selected for seed. Had more regard been paid to the compactness of the rows upon the cob, the gaps which often occur between the rows might have been bred out. It is generally eight-rowed—sometimes ten. The kernels are very wide and thick, but shallow. The color is nearly buff, being too dull to be called yellow. It is the softest flint corn

we have ever seen, horses with poor teeth preferring it to the Chester Co. Mammoth, which is a yellow dent. The plant is as distinct as the ear. The leaves are very broad, and the joints of the stalk, which is comparatively small are closer together than those of most varieties. Each kernel sends up from four or five to one dozen suckers, which are so vigorous that the plant assumes the form of a bush, all the stalks of which are equally developed—many of them in favorable seasons bearing ears of corn. The stalks grow to the height of about eight feet. The propensity to sucker in field corns is generally deemed objectionable, for the reason that the suckers, as a rule, are feeble plants which bear little grain, and are therefore valuable only for fodder. The Thoroughbred Flint, however, is valuable considered only as a fodder plant, because of its broad and abundant foliage, while we have found it to yield as much grain as any other flint corn we have ever raised."

Culture of a Great Yield.

The following is the statement of John C. Harp, Beaver Creek P. O., Maryland, age 15, a contestant for the Newcomer prize for raising corn. Dimensions 205 $\frac{1}{2}$ feet long and 53 feet wide; heavy clay limestone soil; plowed on the 17th April, 1882. Kind of manure and fertilizers; three one-horse loads of barnyard manure, three one-horse loads of hog pen manure and two bushels of wood ashes; the three one-horse loads of barnyard manure were applied before plowing, and plowed under; the three loads of hog pen manure were applied after plowing and the two bushels of ashes were sprinkled along the rows. The seed corn was yellow, planted on the 19th of May; two grains dropped in each hill, one stalk was left in each hill generally, occasionally two; the rows three feet apart; the corn planted 9 inches apart, cultivated with the hoe three times, plowed with the shovel plow three times, about half the corn was topped about the middle of September. Height of tallest corn 16 $\frac{1}{2}$ feet, average height of corn 14 feet. Corn harvested October the 5th, 1882; the estimated value of manure used was three dollars and fifty cents. Number of days in cultivating and husking corn, 15; the corn as above weighed in the ear, 3553 lbs.

The committee, Messrs. Newcomer and Landis, certify that they superintended the husking and weighing of the above corn. Every ear that had 20 or more kernels on it was weighed.

For the Maryland Farmer.

Potato Rot—Its Cause and Cure.

BY J. W. DARROW.

Of late years there has been much loss to farmers from the potato rot, and to a large extent it seems to have been unnecessary. With proper precaution in selecting and planting the seed, we believe that the attacks of the fungus which produces the rot, as we shall attempt to show, might have been obviated. Debility and deterioration in the plant itself induces fungus growth, so in the first place, let us consider what may and does cause debility in the plant.

1. The planting of immature tubers induces feeble growth and debility in the plant, since immature potatoes are wanting in starch, the element which gives nourishment to the young plant. Its vigor and strength will depend largely on the supply of starch afforded. Deterioration might not be noticable in one or two seasons, but the tendency would be towards the worse.

2. Excessive fertilizing, especially with nitrogenous manures, is liable to produce a weakness in the plant. By too high cultivation, inducing rapid growth, the plant tissues must consolidate so effectually as in moderate growth; the organs of the plant are overworked and become surcharged with stagnant matter; on account of too little starch the potatoes become watery and more susceptible to the rot. Our object should be to stimulate to moderate yet healthy growth.

3. Sudden changes of temperature have a weakening influence. In sections where there are sudden alternations of heat and cold, and of wet and dry weather, the organs of the plant cannot perform their functions of elaborating the sap for plant growth; they become paralyzed. On the leaves and stem are found numerous pores or *stomata*, and through these the surplus water is eliminated. These are open in wet weather and closed in dry, in order to pre-

vent too great evaporation. During a heavy rain a great deal of moisture is absorbed both by the leaves and by the spongioles of the roots, and the plant becomes gorged with water. Supposing now a dry spell occurs! the pores are closed; evaporation is very moderate, the fluids become stagnant and in a short time the whole plant is a fit subject for disease. There are what may be termed indirect or predisposing causes of the potato rot proper, which we believe to be directly caused by a *PARASITE FUNGUS*, botanically known as *Botrytis infestans*. It is closely allied to the common fungi, such as mushrooms, toadstools, mildew, and the like. Seeds or spores of this fungus are continually floating in the air, and are almost infinitesimal in size and infinite in number. At a favorable opportunity they strike upon the leaves of a plant and are taken into the pores or openings, so scientists assert, or find their way to the roots and are taken up by them and circulated with the sap. Minute rootlets are soon thrown out, called *mycelium*, these check elaboration of sap and appropriate the vital energies of the plant for their own growth. It has been shown that if these spores are applied directly to a tuber decay will soon follow. Any plant is more susceptible to this influence if it is in a debilitated condition such as we have mentioned before.

A few words now as to the preventives of fungus growths, which is, after all, the important point.

1. Do not use nitrogenous manures, as they favor fungus growth—but lime, ashes, gypsum, &c.

2. Do not plant potatoes on low wet ground, it favors decay; dampness is a fore-runner of rot.

3. Plant only mature seed and let no manure come in contact therewith.

4. Stimulate to a healthy vigorous growth in the plant; weakness and debility therein make it more susceptible to fungus attacks.

For the Maryland Farmer.

Starting Grape Cuttings.

We recently tried the following method of starting grape cuttings, with good results. All who are familiar with the practice of starting cuttings in the open air, know the difficulty of rooting the slips during a dry,

cold spring. The buds often start vigorously at first, growing on late into the season, when they suddenly wilt and perish. Upon examination it will be found that the rootlets have failed to start from the lower bud of the cutting, and the growth above has depended upon the moisture around and in the cutting. Very often the cutting refuses to start at all, from some reason not understood. By the method practiced last spring, I succeeded in rooting at least 75 per cent. of all cuttings put in, which is more than double the percentage I usually secured in open ground. I first cut the canes of last season's growth into as even lengths as possible, leaving from two to three buds to each, according to length of joints. These I tied in bundles of several hundred each, laying them carefully, with the buds all pointing one way. These were set in a cold frame with the buds pointing downward. They were set evenly and closely together and the space carefully filled in with earth, next, I covered all with one and a-half inches of good, rich mold, scattering over this an inch fine straw, to retain the moisture. Putting on the glass I gave them no further attention for 3 or 4 weeks, except to cover up of nights and water frequently as required. They were put in the cold frame the middle of March, and by the latter part of April I found, upon examination, that the ends of the bundles next the glass were a mass of small white roots, from one to three inches in length, while the lower buds were still dormant. This was the object sought. The roots starting ahead of the buds made their growth a necessity upon setting out. This I did during a damp, calm day, setting in open furrows, with the top bud even with the surface; filling in was done with the hoe, and the soil near the surface well firmed with the feet. They should not be set out during a dry, windy time, as the tender rootlets are easily killed; set out in the above manner but few will fail to grow, and the start given them in the cold frame will enable them to make a stronger growth than if set out in the usual manner. It is a good plan to mulch the cuttings with an inch or two of sawdust or tanbark manure, this not only gives them a good send off but helps to retain the moisture in the soil so essential to grape cuttings. Weeds and grass must be kept out during the summer and the ground fre-

quently stirred between the rows. Low, moist, rich loam is the best soil for setting out cuttings, wet spots however must be avoided.

Yours respectfully,
Harmans, Md. R. S. COLE.

For the Maryland Farmer.

Onion Culture.

Almost any soil that is properly prepared, provided it is not too wet or too dry will produce onions. As preparatory crops, potatoes, carrots, beets or tobacco fit the ground admirably for this crop, the last mentioned rendering the onion less liable to be attacked by the maggot, its great enemy. Use manure that is well rotted and do not be afraid of getting the soil too rich. Muck composted with dung or wood ashes makes a good fertilizer. Deep plowing in spring is not advisable.

In selecting the seed great care is necessary, and let no one sell you onion seed because it is cheap. The best is the cheapest. It should not be over a year old to be reliable. The amount necessary for an acre varies from three to five pounds, depending on the distance apart of the drills. It should be covered from half to three-fourths of an inch in depth. As to the time of sowing, the location and state of the weather must determine largely, but it is safe to sow as soon as the ground is in good condition in the spring. In respect to varieties, locality must again be considered, but the Yellow Danvers, Red Globe and White Portugal are always desirable sorts.

If onion sets are to be raised, sow the seed very thickly, say about 30 pounds to the acre, having the drills one or two inches wide. A pound of seed should produce three or four bushels of sets. Potato onions or multipliers are propagated by planting bulbs in drills about 14 to 16 inches apart, and one to three inches apart in the row. They are not good keepers although excellent for domestic use in their season. Top onions sometimes called button onions are produced by setting out in the fall, the little bulbs, and in the spring they will throw up a half dozen stalks, perhaps, which will bear the little button onion on top.

J. W. D.

"For four years I suffered agony from a skin disease. Dr Benson's Skin Cure cured me."—C B McDonald, Plantersville, Ala. \$1.00 at druggists.

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

EZRA WHITMAN, Editor,

COL. W. W. W. ROWIE, Associate Editor,

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☞ Subscribe at once to the Maryland Farmer and get the cream of agricultural knowledge.

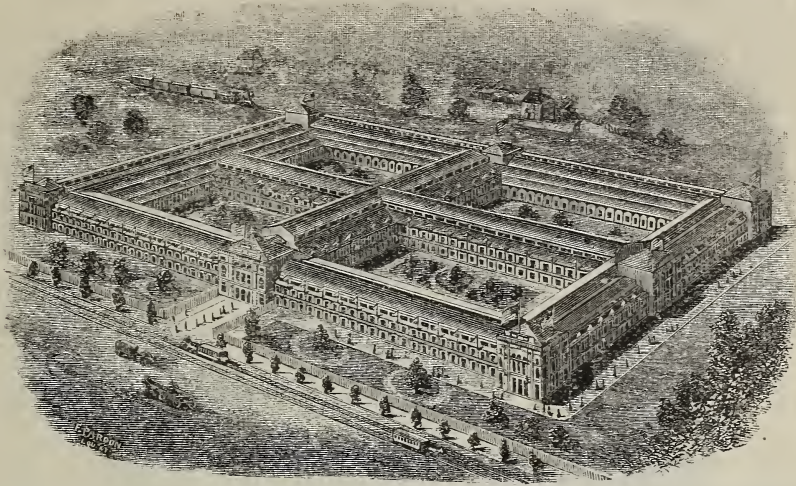
OUR FRONTISPIECE.—We give a beautiful colored print of the famous Prentiss grape, as a frontispiece for our April number. This is one of the finest white grapes that is hardy, productive, and entirely native, we have yet had introduced, and every grape grower should supply himself with a dozen or more vines.

THANKS.—To Mr. Jos. Harris, Moreton Farm, Rochester, N. Y., for a package of his choice vegetable and garden seeds. Also to Messrs. Johnson & Stokes, 1114 Market street, Philadelphia, for seeds. Also to Hiram Sibley & Co., Rochester, N. Y., for box of seeds, and to Mr. J. F. Tillinghast, La Plume, Lack'a Co., Pa., for Potter's Early Drumhead cabbage seed.

NOTICE.

In January last we sent out bills to all our subscribers, many have kindly responded, to whom we return our thanks, yet there are some who have not done so, and this reminder is intended to appeal to their good sense and justice, to settle at once their arrearages, as it is unreasonable to furnish so much excellent matter monthly, at so low a price, without prompt payment.

WE had a pleasant visit lately from Mr. Arthur Chenowith, manager for Mr. P. H. Walker, on his fine farm near Pikesville, Baltimore county, Md. During our interview he gave us many remarkable statements in regard to farm economy and management, by which are fattened yearly nearly 200 head of cattle on the products of this farm of less than 600 acres, and sell besides 400 tons of timothy hay. But we decline entering into details, however interesting they are to our farmers, as we are promised by Mr. C. a full and particular account of the system pursued on this fine and very productive estate.



The Southern Exposition at Louisville, Ky.

This great exposition will be opened August the 1st, and continue for one hundred days. We are enabled by the Secretary of the Association, to give a cut of the grounds and buildings as they will appear when ready for the opening.

This cut gives the best representation of this extensive building, it is possible to get on paper.

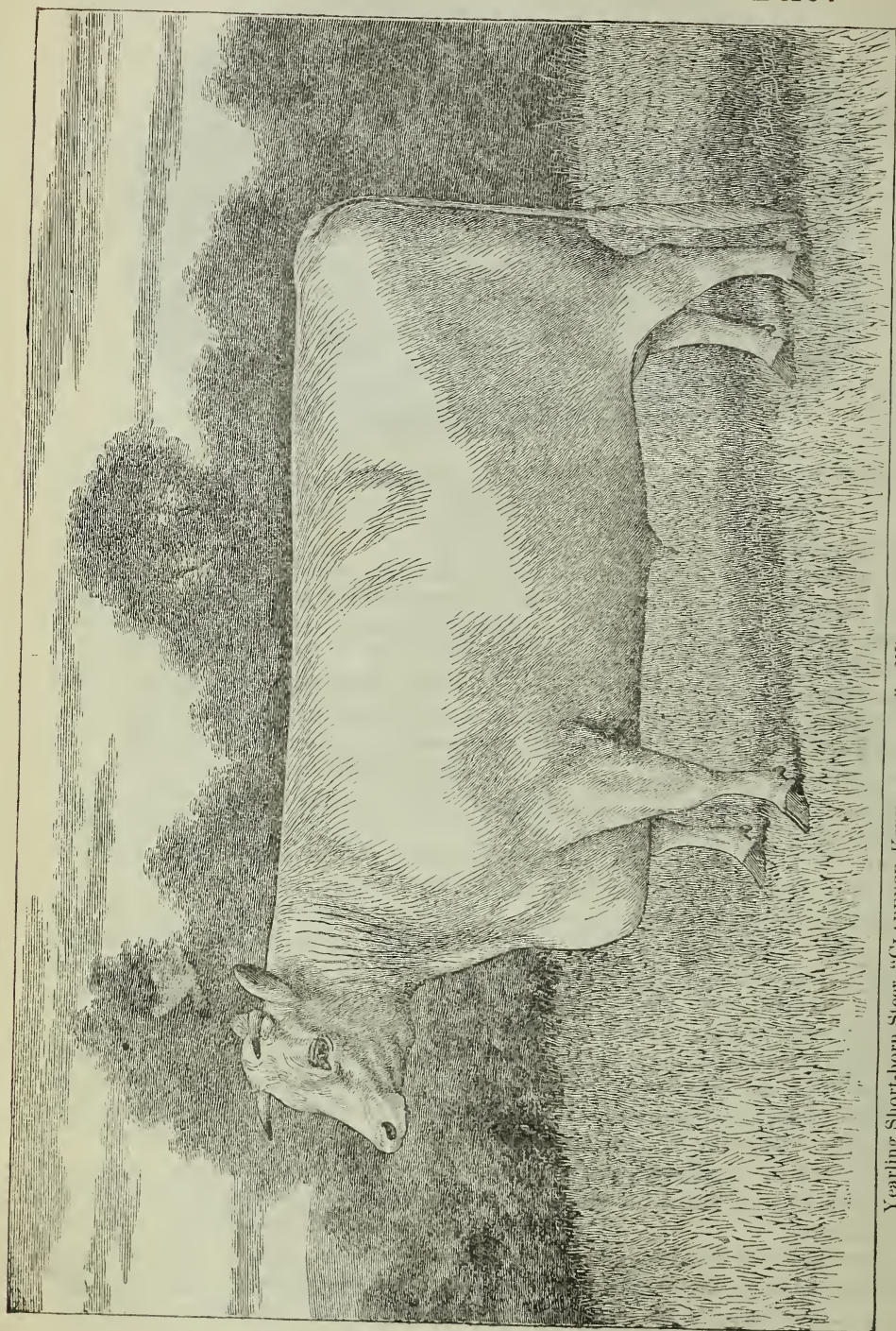
The cut shows four courts, each contains half an acre. The grand total of the exhibition buildings will cover two acres. The height of the buildings will be in proportion to the great width and length of the same. The lovely grounds of the Messrs. DuPont, 18 acres, called Central Park, was generously placed under the management of the exposition company. These grounds lying adjacent will be a great source of pleasure and comfort to visitors. At this exhibition it is intended that all the diversified industries of this wonderful country will be developed by exhibitions, supplemented by European examples of industries.

The scheme is a grand one and evidences the vim and power of the South in an effort to show her great advance, in forcing

the different industries of the world to contribute to her increasing wealth and reputation.

It speaks well for the famed blue grass region of the renowned *bloody land*, that so gigantic an enterprise should be undertaken by the people of Louisville with only 125,000 inhabitants. But as it is located midway between the North and South and accessible to the great West, it will receive all the necessary aid in funds that may be required to make it an exposition worthy of the immense resources of the whole country. One enlightened citizen of Philadelphia has given \$250 to the Southern exposition, and hundreds in various parts of the country will do likewise. Not less than a million of visitors will attend during the 100 days. The South never did anything by halves, and we trust on this occasion will prove her ability to perform a work ever to be remembered for its success. This is the only way that the broken fortunes of a portion of our lovely land can become rehabilitated and its varied, exhaustless resources and beauties become manifest to the outside world. We say success, eminent success attend this coming great exposition, of which we shall speak more fully in the future.

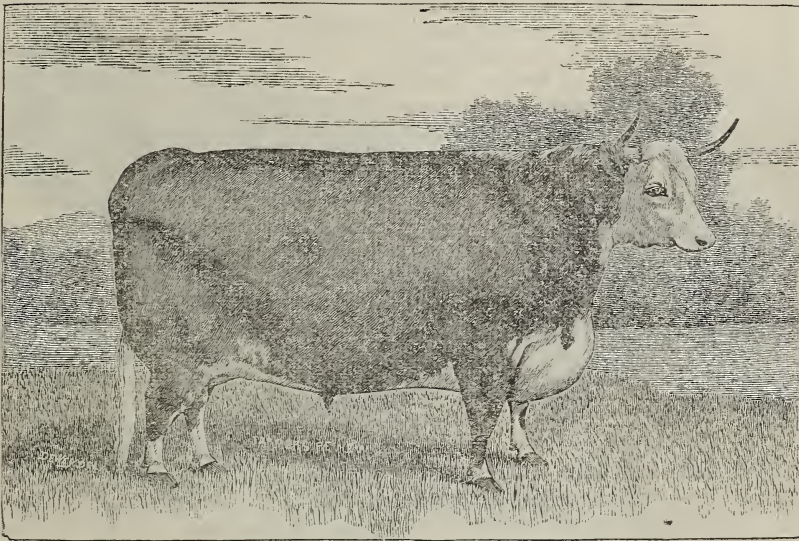
LIVE STOCK REGISTER.



Yearling Short-horn Steer, "CLARENCE KIRKLEVINGTON." Winner of First Prize at Fat-Stock Show, Chicago, 1882.
Property of the Canada West Farm Stock Association, Bramford Ont.

We give two cuts representing young beef animals at the Chicago Fat Stock Show of 1882. We have a purpose in presenting our readers with these illustrations. They represent prize animals of the two leading beef-breeds of cattle—the Short horn and the Hereford. And they show to what size animals can be grown in one and two years, thus saving the keep for two more years. This system is true economy in meat production, and our farmers can take the hint and practice accordingly. It is

not the case, the Canada West Farm Stock Association, of Brantford, Ont., decided to provide a steer of their own raising that would convince the public of the capabilities of stock of the highest breeding, when fed for the butcher's block. The selected a calf whose sire was their well-known imported pure Duke bull 4th Duke of Clarence (33597) and whose dam, Kirklevington Duchess of Horton, was purchased by Mr. A. J. Alexander for his "Woodburn Herd," the price paid being \$2,025. This steer, Clarence Kirklevington, was entered in the class for yearling Short-horns at the



Thoroughbred Hereford Steer "WABASH," owned by Earl & Steuart, Lafayette, Ind., winner of "Farmer's Review" Gold Medal for best two year old, at Chicago Fat Stock Show, 1882; weight 1940 pounds.

evident that early maturity and proper feed and keep are the two essentials that beef-producers are to keep in their view if they desire to make the most profit from raising or feeding beef cattle.

We are indebted to the editor of the *National Live-Stock Journal*, Chicago, for the beautiful illustration of the yearling Short-horn steer, winner of first prize at Fat Stock Show, 1882, and also for the remarks that follow in explanation.

"It has been claimed by some, that what is called fashionably-bred Short-horns, are inferior animals for the practical uses of the feeder and butcher. To show that this is

recent show, where he was awarded first prize. He was also shown in the sweepstakes class for yearlings, where there were 26 entries. It seemed to be the general opinion that he was sure of this prize, but the committee gave it to a grade Short-horn steer that, although 70 days older, weighed 20 pounds less. Good judges of cattle regarded this a mistake on the part of the committee, and their decision was criticized very freely."

Our thanks are tendered to the *Farmers Review*, of Chicago, for the handsome illustration of "Wabash," a thoroughbred Hereford steer, two years old, who carried off the "REVIEW'S" gold medal over all competitors.

We should be glad to see in Maryland, at our State Fair next fall, a show of fat stock of Maryland growth, including all the beef breeds now in our midst, such as the Short-horns, Herefords, Angus Polled and the Dutch Fresian cattle. Our State has many noble specimens of *beef-breeds*, while she stands unrivalled for the *butter-breed*, and has but few peers in the *milk-producing breeds*.

The Wool Supply.

Estimates of the wool production of the United States, place the yield for 1882 at 300,000,000 pounds, or 100,000,000 pounds more than that of the next preceding year, and last year's imports of foreign wools were 19,566,600 more than those of the year before. These two items give 29,566,600 over the total supply of 1881, and to those should be added the 3,801,600 shortage in the markets, making a total of 33,868,200 pounds more withdrawn for consumption last year than was used in the year 1881. With such activity in manufacturing woolens, and such an increase in imports there seems to be no immediate danger of wool growing in the United States becoming very unprofitable.

How to Catch a Horse.

If a horse is shy and hard to catch, take finely grated castor oils of rhodium and cummin. Keep them in separate bottles, well corked. Put some of the oil of cummin on your hand and approach the horse on the windy side. He will then move toward you. As soon as you can reach him rub some of the cummin on his nose, give him a little of the castor or anything he likes, and get a few drops of the oil of rhodium on his tongue. After this you can make him do nearly everything you want. Treat him kindly, feed well, handle gently and your victory is certain.—*Turf, Field and Farm*.

The fatter a breeding sow is kept, the more liable she is to destroy her sows by lying on them or eating them up. Sows left to run wild make good mothers, and will generally select a warm dry place to farrow. It is for this reason that there is so much advantage in using full blooded

boars of improved breeds on larger, coarse boned native sows. The progeny secures the good qualities from its sire, with a better constitution and more hardness than it could get from a full blooded pedigree, going back through generations which have always had ample feed and little exercise.—*Exchange*.

Trotting Stock of United States.

Prof. Brewer, of Yale, and director of the Conn. Experimental Station in a paper recently read before the State Board of Agriculture, of that State, said:—

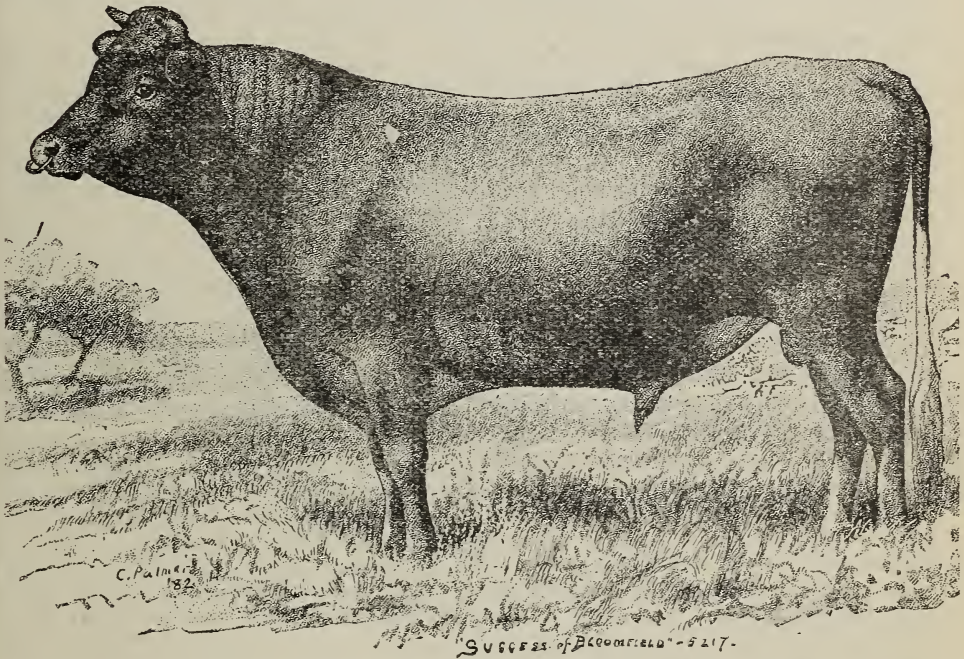
"The first demand for trotters seems to have sprung up in Connecticut, where horses advertised for sale in the newspapers sixty years ago, sometimes had it said of them that said horses 'trot' or 'can trot.' A market for fast trotters was found among the wealthy planters in the West Indies, who, it seems, were acquiring a taste for this kind of sport. But the fast trotters of that period would hardly be reckoned as such at the present time. When the horse 'Yankee' made a mile in one second less than three minutes, he astonished the world, as well as the unlucky man who bet that no horse could do it. It was so! years later that 'Topgallant' brought the record down to 2.40, and in 1843, Lady Suffolk lowered it to 2.28. Thirteen years later, in 1856, Flora Temple dropped it to 2.24½, and in 1859, to 2.19½. It then took seven years more to bring out a Dexter capable of reducing the fastest time record only 1½ seconds, or 2.18, and one year more to reach 2.17½, then four years more to get off that quarter of a second, which was done by Goldsmith Maid. Eight years more of breeding brought out Rarus, who reduced the time in 1878 to 2.13½. St. Julien, a year later, got off another half second, and Maud S. has taken off a few more, reducing the time to 2.10 and a fraction.

"Fifty years ago, nobody could have been made to believe for a moment that a horse could ever trot inside of three minutes, but now it is confidently expected that one will yet make a mile in two minutes, for, said Professor Brewer, we have not yet established a breed of trotters, but are only beginning to form such a breed. The

sports started the breed, but the community has built it up. A new want has been felt, and a new fashion sprung up, and breeders are endeavoring to meet that want. In 1843 there were but two horses in America that could trot a mile in 2.30, while in 1881 there were over twelve hundred who could do it. What our trotter is, the American has made him. In England, a man could not know what a race meant without two or more horses to run for a prize. They have no records there. In this country we have not been satisfied to beat our neighbor's horse, but have been trying to beat old 'Father Time,' himself."

Annual Meeting of the Dutch-Friesian Association of America.

The annual meeting of the Dutch-Friesian Association was held February 21st, at Utica, N. Y. At the meeting we are glad and have a State pride in saying that our friend, F. W. Patterson, Lockearn, Md., was elected president. The vice-presidents were Hon. Wayne McVeigh, Pa.; G. M. Emmerick, Des Moines, Ill.; Hon. W. L. Webber, Mich.; L. C. Payne, Ohio; C. L. G. Blessing, N. Y. and J. L. Stone, Pa.



Jersey Bull "Success of Bloomfield," 5217, A. J. C. C. Property of Mr. Silas Betts, Camden, N. J.

We are enabled, by the courtesy of Mr. Betts, to give the picture of a high bred Jersey bull, by Reveller 2677, and out of Tritonia, 5443.

SUCCESS traces to five of the families that have produced the best butter cows, viz:—Imp. Pierrot 636, Countess 114, Prince John, 22, Splendid 2 and Patterson 11. This is a great distinction and stamps Success, of Bloomfield, as one of favorable notice by breeders.

Secretary, S. Hoxie, Whitestown, N. Y.

Dr. Patterson responded to the compliment paid him, in a very eloquent and appropriate address, and afterwards read a highly instructive paper upon *The Cow of the Future*. Other papers of much interest were read, and it is now understood that the Dutch-Friesian cattle have a standing among the best improved breeds of cattle in this country, and must command the widest reputation among the

dairymen, as milk givers, ranging from 5,000 to 18,000 pounds of milk per year, for cows from 2 to 3 years old.

These cattle have for years been commanding the public attention, and may possibly become the milking cow of the period. But we think it essential for its identity that it be agreed by the different importers and breeders of this race, that a common name be adopted. We suggest the simple one of "Dutch" as the popular one. We have the "Holstein," now rendered famous by Smith & Powell, and others, the "Dutch" by several breeders and the "Friesian," by later importers.

All the little differences of locality of birth can be reconciled. Where did this breed originate and where was it made famous? are the questions that a purchaser desires to know when he purchases one of this breed, to correctly name his stock. Until a common name be settled upon, no man can know whether he gets what he wants or not. We feel sure that very soon the right name as a universal one will be pleasantly settled upon by breeders of this most wonderful milk yielding portion of the cow kind. Their yields of really nice, pure, good drinking milk are wonderful and challenge the amazement of the thinking world.

How it is possible for a cow to yield over 10,000 pounds of milk per year, to get herself registered into the "Main Register" of the Dutch-Friesian Association, is more than we can easily understand, but that enormously high record has been fixed upon, and we suppose that the breeders of this stock know what they are talking about. It would look as if these Dutch cattle were about to become the leading breed in this country, as they claim to be good beef cattle of large size, fine oxen, excellent cream and butter breeds, and the *greatest yielders of milk* of all other breeds known to civilization. If these qualities can be established, they are beyond question

the *coming* breed of cattle over all others. Of their milking powers, as to quantity there can be no dispute, because their production of milk has had recorded instances which seem to surpass credulity. 18,000 lbs. of milk from one cow a year! This product cannot be doubted however astonishing the fact may appear.

THE DAIRY.

For the Maryland Farmer.

The A. B. C. of Butter Making.

THE GENERAL REQUIREMENTS. No. 2.

It seems strange that the impression should exist, that fine butter making is a "secret," and the skill required is only to be attained by those, who are by some mysterious manner, initiated into its conclave. Nothing can be farther from the truth, and it is in supposing that such a state of things exist, that has hindered a general progressive moment in the production of fine grades of butter. Next to this, we may say that another matter that has retarded progress is in not understanding a few of the simple principles which govern the the conditions of cream and butter making, and causes the production of what should be a table luxury, to become one of the manufacture of butter fats, the choice elements which skill and attention can alone give, being nearly or wholly wanting.

The time has arrived when reckless waste cannot longer be tolerated in making of butter. Butter has out-grown the original bounds, and now, instead of being a quantity of oil to furnish our bodies with so much carbon for heating purposes, it has in addition become a table luxury as its price fully warrants its claims as such.

To make good butter, does not imply that one should buy expensive apparatus, or await the erection of cream gathering butter factories, which will eventually make the greater mass of our butter. It only needs a careful study of a few conditions and a close observance of them, and the cutting loose from old time traditions in the past. No better butter was ever made in the world than has been made with an open, ten quart pan in which to set the milk, and this excellence may be continued,

but in so many cases, is it impossible to observe conditions necessary, that the modern creamery apparatus, must take the lead, for with these last, uniformity can be secured, which only can be in isolated cases with the pans. Yet, it is with pans and crocks we propose to deal, and at each stop tell the why and wherefore of the work.

Having seen that butter is of both vegetable and animal origin, we will also find that food influences the product to a greater extent than simply furnishing it with part of the fats, for the color is very largely in the food. The same cow fed upon buckwheat meal, or similar foods, will produce white butter, and the same animal fed upon yellow corn meal, wheaten shorts and the like, will give golden butter fats, and the same thing is true in respect to the quality of the butter. Golden Roots, the early cut hay, grains largely composed of oily matters, make the finest butter, no matter what the after process of making may be, so that butter is actually half made when the milk is set down in the butter house.

Milk has two principle elements, fats and casein, or cheese. While the butter may, and does add largely to the value of the cheese, when made, the reverse is not true with the butter, and every step in its manufacture, should be to separate these elements, for it is the casein, or cheese, that "spoils the butter." Then we may say that perfect butter is only made from the milk of well fed cows, for it is the size of the butter globule that gives the product its character, and the poorly fed cow furnishes a small impoverished globule that at best can only result in a greasy mass, and lacking in texture.

Always milk in a stable, as then your cow stands quiet, and either before or after milking, give a small ration of some palatable food if the cow runs to grass, or if stabled soil as circumstances demand. If the stable is kept clean, well littered with straw, and sanitary conditions observed, no reason can exist why first class milk can not be obtained, but in the open yard, with dust, rain, and wind alternating, and an occasional run across the yard, practiced in pursuit of your cow, the chances are for a mishap somewhere. Strain the milk as quickly as possible after milking into the pans, for it is in the falling temperature of

the milk that gives the cream its power to rise.

Where to set the milk is an important point, for it needs pure, sweet air, and that in a room which if open pans are used, will not be subjected to changes of temperature. Somewhere in every house is a room away from the kitchen and the steaming cook stove, where milk can be set and cared for, and in this room the butter should be made. As near 60° as possible is best temperature, for with "old fashioned" utensils, the extreme cooling of the creamers not being attended with good results.

Why does the cream rise? Properly it does not. The serums or non-buttery parts of the milk, upon cooling, become condensed, and in so doing take on an increased specific gravity, and by the simple laws of gravitation they are crowded down and this forces the fats, which are naturally of lighter gravity, to the top. It is this principle that is taken advantage of by the creamery men, who, by their apparatus, expose a large surface of the milk to the colder element of ice water, and by the sudden condensing of the serums almost instantly force the cream globules to the surface. But, it may be asked—why does the cream not all come to the surface—if this is true. It is because the little globules have a greater resisting surface in proportion to their size than the large ones have, and they are thus held in suspension, or what is the same, their motion is so slow that they are practically at rest. It is these infinitesimal globules that remain, and it is from these that poor butter is made, and their non-appearance at the surface is not one of actual loss, for their presence while perhaps adding a fraction to the weight of the butter, would at the same time detract from its value. This is proven by the skimming of a quantity of milk, at intervals of two hours, each skimming giving a distinct quality of butter, the first, very fine, and the last composed of these small colorless globules, making a butter quite worthless in character as compared with the first cream removed. The cream from the open pans should be removed at the very first detection of acidity of the milk, even before, and to allow it to become thickened or "loppered" is not the best way by several majority.

J. G.

OHIO.

Salting Butter.

Prof. Johnston, of Connecticut, says:—Fresh churned butter contains a quantity of the milk serum (buttermilk) which it is one object of salting to remove. When salt is worked into butter, each grain of salt gradually dissolves in the buttermilk and withdraws it from the butter, probably shrinking the bulky, jelly-like caseine, just as salt mixed with a jelly of soap shrinks the soap into a small, firm cake, and unites with the water to make a brine. If the salt be very fine, the result is to fill the mass of butter with a multitude of very small drops of brine which are difficult to work out of the butter. On the other hand, if the salt be very coarse the buttermilk will gather in large drops, easy to work out but the salt grains will not be entirely dissolved and will make the butter too salt and gritty to the taste. The proper fineness, therefore, is that which comes just short of occasioning the last named difficulty, so that by its use we remove the buttermilk thoroughly without leaving any unpleasant surplus of salt in the butter. According to Alexander Muller, the grains of a good dairy salt should have dimensions lying for the most part between 1.25 and 1.50 of an inch in diameter.

OUR LETTER BOX.

For the Maryland Farmer,

A Horse Ailment—Choked with a Corn Cob.

One of my horses was found unwell; it appeared hungry, would chew its food but not swallow it; it would drink but with difficulty and sparingly. The throat was not swollen and no indications of fever. There was a considerable discharge of mucus from the mouth; but none from the nose. A dose of flaxseed oil was given it, and it was observed that the tongue was swollen and somewhat excoriated, the animal was not droopy. The next day by thrusting the hand well back, a part of a large corn cob was found lodged across the roof of the mouth, it was removed, and the horse soon became well. Had it not been discovered the horse would have died.

D. A.

Ammdendale, Md., Mar. 9th, 1883.

[The above is worthy of consideration.

Many valuable horses have no doubt been lost from similar causes and want of close examination before administering remedies for supposed diseases. We thank our distinguished correspondent for this valuable hint in the treatment of a horse.—Eds. Md. FAR.]

Messrs. Editors:—On a recent trip through the Cumberland Valley, I had the pleasure of spending a few days in the charming town of Chambersburg, renewing acquaintances and making some valued new ones. Visiting art galleries and other places of interest afforded me much gratification. At the studio of Prof. McClurg, I found some of the art in "pastel" far surpassing anything I have ever met with, and in this wonderful art the Professor has made advances not heretofore attained. In the vase ornamentations, Mrs. McClurg is one of the most accomplished artists of this country.

At the Chambersburg nurseries I found the proprietor, William B. Read, Esq., and was entertained by him in a most agreeable manner, and indeed, I was charmed with his conversation and the pride he evinced in the cultivation of his fruits and flowers. The "Queen of Flowers" is cultivated as a specialty, and his collection of roses comprises a large variety of the finest in cultivation. His Marechal Neil, a beautiful golden yellow rose, now 2 years old, is not a bush but a tree, and nearly fills a large hot house with its spreading branches and is certainly one of the finest in this country, and blooms nearly the entire year. Last season this splendid tree furnished many hundreds of cuttings and nearly four thousand buds and blooms for bouquets. The flowers are large, double, fragrant and among the finest in cultivation.

Mr. Reed expressed an earnest wish to make the acquaintance of the proprietor of the "Maryland Farmer," who for many years had so earnestly and faithfully pressed the cause of agriculture, horticulture and floriculture upon the minds and hearts of the people of this country.

From B. F. G., of Baltimore, Md.

Oxford Sheep.

Ellenborough, Mar. 13, 1883.

E. Whitman, Esq.—In answering your request to send you a description of my

flock of Oxford Down sheep recently purchased of Mr. F. S. Cooper, I can't do better than quote him. "The ram at the head is Royal Liverpool, the best son of Freeland and a prize winner for three consecutive years at the Royal show, besides taking a large number of 'firsts' at local exhibitions. The ewes are the pick of the flocks of Messrs. Treadwell and Geo. Street, noted as being among the foremost of English breeders, and the greatest care was exercised in making selections, taking only such animals as had close, compact fleeces. The lot includes a pen of five that won 1st prize at Aylesbury, in 1882, and nearly all were served previous to importation by Royal Liverpool, Lord Derby, Wallis No. 7, Hobbs No. 5 and Earl of Oxford. A few together with the home-flock were put to Rostram, an imported three-year ram, a grand-son of Freeland. My flock consists of Royal Liverpool, 22 yearlings, 15 older ewes, *all imported*, with 2 young ewes by Freeland, and 2 lambs of last year, 42 head in all."

In the fall of 1881 I purchased of Mr. Cooper, five ewes from his importation of that year from the flocks of Messrs. Treadwell, Albert Brassy and Fred. Street; at the same time from Mr. J. Hand, Sing Sing, N. Y., the ram Albert of Linden, by Freeland, out of No. 13 in prize pen at Centennial. These with three lambs reserved from last year, make my flock now number fifty, and Mr. Cooper tells me it is the finest flock of Oxford Downs now in the United States.

Eighteen ewes have dropped 26 lambs. One of them has three whose weight was 24½ lbs. when one day old, and I have single lambs which weigh 35 lbs., one month old. It is not necessary to add the ewes are good mothers.

Oxfords have been bred in England about 40 years, and recognized at the stock shows as a separate class for 20 years.

Freeland has taken more prizes than any living sheep, and many times Oxford rams have taken sweepstakes prizes as best bucks, long or short wool: I believe they will be the most popular breed in this country.

Very respectfully,

F. C. GOLDSBOROUGH.

The Frenching of Corn.

Eds. Md. Far.—The Frenching of corn as is well known often proves fatal to a

good yield of this grain, and anything to prevent it will prove a blessing to lands liable to French. Black residuum from the prussiate of potash works, composed principally of carbon or charcoal has been used extensively in some localities, and not without apparent success with some, but has failed with others. A friend in Harford county informs me that he has found the application of coal oil, about two gallons per acre, an excellent application, being mixed thoroughly with enough dry earth or fertilizer to supply a small handful to each hill. Speaking with Prof. Lugg, of Maryland Academy of Science, who is familiar with the insect doing the mischief, he thinks the application a good one, and as a genuine bird guano is now in the market and sold cheap, such as Avalo, Morant, Orchilla Flamingo, &c., I think mixing the oil with some of these the application might be of service, as they all have a large percentage of phosphoric acid and other salts in fine condition for plant food.

A. P. S.

ROCK HALL, MD.

LADIES' DEPARTMENT.

Chats with the Ladies for April.

BY PATUXENT PLANTER.

APRIL.

"We gladly pass thee, blustering March:

To greet thy gentle sister April:

Your chilling ways, have been so harsh.

That any change can scarce be ill.

And so, we'll welcome sun and showers:

That, coaxing peeping blade and swelling bud.

Break winter's bond, to speak, through fragrant flowers,

Of summer skies, of luscious fruits and harvest good."

"From the elm tree's topmost bough,

Hark! the robin's early song,

Telling one and all that now

Merry spring-time hastes along.

Welcome tidings dost thou bring.

Little harbinger of spring."

This month nature seems to find its re-invigorating powers. The earth unlocks her frozen treasures and dons her green apparel; while summer songsters again visit us; buds swell and young leaves appear with the bright faces of early blooming flowers, all adding to the effect of the green carpet nature has spread and made so soft and velvety for the reception of the gouty foot of age, and the naked one of playful child-

hood. Or as that gushing German poet, Swinburne says:

"For winter's rains and ruins are over,
And all the season of snows and sins;
The days dividing lover and lover,
The light that loses, the night that wins;
And time remembered is grief forgotten,
And frosts are slain and flowers begotten,
And in green underwood and cover
Blossom by blossom the spring begins.
The full streams feed on flower of rushes,
Ripe grasses trammel a travelling foot,
The faint, fresh flame of the young year flushes
From leaf to flower and flower to fruit."

But April does not come only to delight and amuse with her coquettish smiles and tears, and her glimpses of the change from winter to summer, but to say to all who cultivate the soil, "up and be stirring; farmers, shake off the enervating lethargy of the ground-hog, and energetically begin your year's labor." And so nature speaks to women—be up early, and command robust health by superintending in the morning your flower borders, looking after your poultry, or superintending the dairy. Let the earliest beams of the sun kiss your cheeks, outside the house; the cooings of your pet pigeons and the early songs of birds greet your ears, while you inhale the pure air laden with the perfume of dew-spangled flowers. For health and enjoyment do this, and you will have rosy complexions and happy hearts.

There are many small industries country life offers which can be practiced with both pleasure and profit by ladies, girls, boys and infirm people, which I shall probably enlarge upon during my chats this summer, noting each one specially.

One of these industries I now call your notice to, because last month there appeared in the MARYLAND FARMER, a very sensible article written by a lady in the far West, upon poultry-raising by women. A little attention and small outlay in this business will enable a smart boy or girl to clear more money in a year than will pay for board and handsome clothing. Think of the great advantage of supplying the household with eggs and meat the year round, which can be done in the mild climate of the Southern and Middle States. Let the boy or girl who takes charge of the poultry, keep a strict account against the head of the house for all the eggs, poultry, feathers and manure saved—which is the best of guano—all of which will be a set-off to board, &c., and all else sold from the poultry yard will go to paying for the food of fowls and clothing or pocket money of the attendant.

Such an account would be interesting statistics, and the gross total would surprise, by its amount, everybody.

Bear in mind always, what the experienced farmer, A. B. Allen, once truly said on this subject: "With fresh poultry, eggs, milk, butter and cheese, a farmer will never want for wholesome, and I will add, a *luxurious* meal, although he may have no other grain and vegetable in his house than Indian corn and sweet potatoes."

Journalistic.

The Poultry Monthly is one of our best poultry journals, published at the low price of \$1.25 per year, at Albany, N. Y., by the Ferris Publishing Co. It is well printed, handsomely illustrated, and as full of practical information as a poulterer could desire.

We cannot forego the notice of Vick's *Illustrated Monthly Magazine* for March. Like all its predecessors, it is admirable, but this number is worthy of all praise, and should grace the table of every lady in the land. Beauty and knowledge are combined in this \$1.25 per year monthly. How so much information and beauty of illustration can be given for so small a sum is a mystery to us. Immense circulation can alone solve the problem.

Agricultural Review.—This is a grand agricultural magazine, published monthly in New York, by J. H. Reall, under the auspices of the American Agricultural Association. Terms, \$3 per year with all the privileges of membership of the Association. This makes the journal one of the best and cheapest of all agricultural journals now published. The February number is peculiarly valuable as it contains the proceedings of the meeting of the A. A. A. at Chicago, with the able papers that were read there by different members from various sections of the country and upon topics of public import and general interest.

Harper's Magazine for April is an exceedingly valuable number. This sterling magazine improves, like old wine, with age, and maintains its foremost rank among the many grand periodicals that now adorn American literature.

The Planter's Journal, Vicksburgh, Miss., is a large quarto monthly journal, well printed and handsomely illustrated, and recognized as the official journal of the "National Cotton Planter's Association of America," lies on our table, and contains a stinging rebuke to some of our contemporaries, who blow their own horns by send-

ing out "stereotype puffs,"—a practice *we* have have never followed and *sternly condemn*. This *Planter's Journal* is a manly, honest paper, full of valuable matter to the reader and worthy of support especially by the Southern people. It is highly creditable to the South. The *Planter's Journal* will during the next thirty days, but no longer, be sent free of charge to any *bona fide* agriculturist who may contemplate subscribing for such a publication.

We congratulate the *Marlboro' Gazette* upon its improved appearance in typography and the handsome face it presents in its old age, being a renewal of youth. The ability of its editorials commands the respect of the press of the State and the addition of new features in its literature—such as the recollections of the past history of the county—must increase its already extensive popularity. We wish well to this long established weekly, and commend it heartily to readers and advertisers as a medium of instruction and profit.

Publications Received.

From U. S. Agricultural Department, a valuable document upon the number and values of FARM ANIMALS, COTTON, &c., also the comparative value of American and European Farm Implements. Also the address of Hon. D. Wyatt Aiken, of S. C., on the "Grange," delivered before the convention, called by Dr. Loring, Commissioner of Agriculture, January 23d, 1883, which is an admirable paper and deserves the consideration of every thoughtful farmer in the land.

DUTCH-FRESIAN HERD BOOK.—This is a handsome herd book, well arranged and carefully prepared, containing Charter and Bye-Laws of the Association, and the rigid scale of points, together with new features, superior to all other herd-books, which at a glance will tell the reader what strain or family are the most reliable and remarkable; price only \$1.50 per volume. It is indispensable to any breeder of this now well-defined breed of cattle, so famous for milk production, size and beef qualities.

TRUCK-FARMING AT THE SOUTH.—Is the title of an excellent manual for raising vegetables in the South for Northern markets, by Dr. A. Oemler, illustrated and published by Orange Judd Company, 751 Broadway, N. Y., price \$1.50. This little volume is so valuable to all truck-growers, market-gardeners and others engaged in gardening in the South, that we cannot well see how such persons can get along success-

fully without being possessor of a copy. Consult your interest and get one,—for the South, it is what Peter Henderson's "Gardening for Profit" did for the whole country. There is money in these practical manuals if they be read and the suggestions followed.

CREAMERIES AND DAIRYING IN NEBRASKA.—Quite an interesting pamphlet, and shows to us on the sea-board, conclusively, that if dairying can be carried on successfully as far West as Omaha, it would be much more of a success if presented close to the Atlantic shores, with large home markets right at hand. Dairymen and farmers take note of this.

THE ELZEVIR LIBRARY.—Is a remarkable magazine, intended to present in each number a gem of literature. The numbers taken together form a unique cyclopedia of the world's choicest literature of nearly 3,000 pages, for the small sum of \$2 00 per year. How so much select literary reading for so small a sum can be given is incomprehensible to us. Address J. B. Alden 18 Vesey street, N. Y.

Catalogues Received.

N. N. Smith's illustrated catalogue for 1883. South Sudbery, Mass.

V. H. Hallock & Son and Thorpe's illustrated catalogue of bulbs, small fruits and seed; Queen's, N. Y.

J. F. Tillinghast, LaPlume, Lackawana Co., Pa.

The Grain and Farm Seeds Manual, Hiram Sibley & Co., Rochester, N. Y. This is a really valuable reference book for farmers; price 10 cents.

A. M. Purdy's descriptive catalogue for 1883 of small fruits. This is a nice, reliable work by the well known editor of the "Fruit Recorder and Cottage Garden," Palmyra, N. Y.

Ellwanger & Barry, Mount Hope Nurseries, Rochester, N. Y., a handsomely illustrated catalogue of ornamental trees, shrubs, &c., for 1883.

Jas. M. Thorburn & Co.'s catalogue of seeds for garden of flowers and vegetables, &c. This is one of the oldest seed houses in the United States and of established reputation.

John Saul's catalogue of plants for 1883, Washington, D. C. This large, descriptive catalogue, well illustrated, and along with it a superb colored engraving of the beautiful rose 'A. K. Williams,' is on our desk. Mr. Saul is too well known over the country for us to expect in any way to add to his reputation, but we cannot withhold our testimony to his never failing compliance with promptness to all orders, and his strict honesty in sending out, true to name, every article ordered. Attention to correctness in sending what is ordered, true to its description, has seemed to him the confidence of customers from all parts of the Union, and residing at the capital of the country he has acquired, thus deserved, a national reputation as a florist and horticulturist.

Maryland Agricultural College.

At the regular quarterly meeting of the Board of Trustees of the Maryland Agricultural College, held at the college on the 9th of March, there were present Governor Hamilton, Barnes Compton, State Treasurer; Geo Hawkins Williams, President of the Senate; Otis Keilholtz, Speaker of the House of Delegates; Hon. G. B. Loring, United States Commissioner of Agriculture; Wilmot Johnson, Ezra Whitman, F. Garroll Goldsborough and Allen Dodge. Hon. J. Carroll Walsh arrived after the board had adjourned. The special business before the board was the election of a president for the college, to succeed Captain Parker, resigned.

There were three candidates presented, viz: Mr. Augustine J. Smith, Mr. E. M. Massey, and General McBlair. Mr. Smith was elected on the third ballot, receiving the votes of Governor Hamilton, Messrs. Compton, Dodge, Whitman, Johnson, Goldsborough and Commissioner Loring, who declined to vote on the previous ballots. Mr. Smith was strongly endorsed by testimonials from prominent men, both in Maryland and Virginia.

A committee consisting of Messrs. Compton, Johnson and Whitman was appointed to inform Mr. Smith of his election. This duty the committee discharged and received the following reply:

BALTIMORE, *March, 16, 1883.*

HONS. WILMOT JOHNSTON, BARNES COMPTON and EZRA WHITMAN, Committee of the Board of Trustees of the Maryland Agricultural College.

Gentlemen:—I have the honor to acknowledge the receipt of your letter of this date, announcing my election to the presidency of the Maryland Agricultural College by the Board of Trustees of that institution, on the 9th inst.

In accepting this honor, gentlemen, I appreciate it as presenting an opportunity to do a grand work in advancing the agricultural interests of Maryland, which should fill the measure of any man's ambition to strive for.

The fact that I hold advanced ground in favor of making the agricultural feature in its practical and experimental, as well as in its theoretical forms, supreme in the course of instruction, and the other branches of the curriculum auxiliary to this end, should satisfy the most exacting champions of advanced agricultural education, and I trust I shall meet at the threshold of my work, from the friends of agricultural education throughout the State, that just and generous criticism which is too manly to pre-judge, but prefers rather to give the new administration a fair trial.

I prefer to act upon this presumption in entering upon the discharge of my duties; and relying upon the cordial co-operation of the Board of Trustees, I shall, at least, strive to do my duty to make the College not only the educator of young men fit to move among their fellows without humiliation in point of education, but at the same time will endeavor to establish a model and experimental farm, where the farmers of Maryland may have the opportunity of seeing all problems solved relating to their great industry.

Thanking you, gentlemen, for the courteous manner in which you have presented the communication of the Board of Trustees, I am, with great respect,

Your obedient servant,

AUGUSTINE J. SMITH.

Without any disparagement to the merits of the other candidates, who are worthy and excellent gentlemen, we congratulate the friends of the college upon the selection of Mr. Smith for the honorable and responsible position of president of that institution. We believe he has a true conception of the needs of the college and also possesses the ability and energy to utilize all its resources to the best advantage. We are sure he will be able to inspire renewed confidence in its possibilities among the friends of agricultural education throughout the State, and by correcting the errors and misunderstandings existing, create a healthy public sentiment favorable towards supporting the college with such pecuniary aid as will enable it to be placed on a career of usefulness and prosperity. Already letters of congratulation, some of

them offering scholars, indicate that new life is being infused into the college.

The following notices taken from the press of this city and our exchanges, including several from his native place, show the esteem in which Mr. Smith is held where he is known.

The *Baltimore American* says:

"Mr. Smith, the president elect is a native of Winchester, Va., and is a member of one of the oldest and most prominent families of that State. He has been a resident of Maryland for twenty-five years past. He has devoted his leisure moments to the gratification of his literary tastes, and is known to his large circle of acquaintances and to the press, as a writer of ability upon a number of subjects of public interest. His series of articles on cane and sorghum culture, published some months ago in the MARYLAND FARMER, commanded extensive comments of a favorable character, and his address on agricultural education, recently delivered before the National Agricultural Convention at Washington, elicited widespread praise and comment from the press throughout the country. Mr. Smith is a man of energy and extensive experience, and the friends of the college believe him to be the right man in the right place.

Since the election of Mr. Smith, the newspapers in the sections of country where Mr. S. is best known, have spoken, without an exception in complimentary terms of him, and in justice to him we give a few extracts to show in what high esteem he is held by those who know best his ability and fitness to perform the duties of the office of President of the college.

The *Winchester Times* says:

"This is a 'nomination fit to be made,' as all who know Mr. Smith will agree. And he is known to almost everyone of middle age, in this, his native town. For moral character, intellectual power and culture, his superior is not easily found. The institution placed under his control is fortunate in having such a head. Like his brother, A. M. Smith, for so many years principal of the Shenandoah Valley Acad-

emy, he has great energy and fine administrative faculties. He has been both busy and useful in his Maryland home, and has turned a fluent and graceful pen to practical account in the promotion of several southern industries."

The "Winchester News" also fully endorses the capacity and high moral standing of President Smith. It says:

A great many old friends and townsmen of Augustine J. Smith will rejoice at the news of his election on Friday last to the presidency of the Maryland Agricultural College. Mr. Smith left Winchester; of which town he was a native several generations deep and all good, at an early age; but not before he made his mark as a business man and a leader in religious and benevolent organizations."

The Alexandria, Va., *Gazette* says:

"The many friends and relatives of President Smith in this city and State will be glad to read the announcement of his election. The college is fortunate to secure such a man for its head. Mr. Smith is the father of Rev. Augustine J. Smith of Petersburg, Va., and of Dr. Wm. M. Smith, of this city, and his family connections are with the oldest and most prominent families of the State."

Other Virginia and Maryland papers make complimentary allusions.

The *Baltimore News* says:

"The selection is an admirable one, the gentleman chosen for this responsible place being thoroughly competent to materially advance the interests of the institution. He is a fine scholar and an experienced business man, combining two very valuable qualifications for a place where both are needed and can be employed to the best advantage. Knowing the gentleman well, we can confidently predict for him an administration creditable to himself and valuable to the institution over which he will preside."

The *Day* also speaks in highly complimentary terms of Mr. Smith.

Fresh air, exercise, good food and Dr. Benson's Celery and Chamomile Pills will, when used together, cure any case of nervousness, sick headache, or digestion. They strengthen the nervous system. 5000 Physicians prescribe them.

Deer Creek Farmers' Club.

Farming Implements and Machinery.

We have only room for extracts of the admirable report of the Bel Air *Aegis*, of the proceedings of this famous farmers' club of Harford County, Md.

The February meeting of the Deer Creek Farmers' Club was held at the residence of the President, Mr. Wm. Munnikhuysen, on Saturday, the 24th inst. The discussion was on farming implements and machinery.

W. D. Lee thought that farmers should have all the improved machinery they need and no more. It is important also to keep it sheltered so as to make it last as long as possible.

George E Silver said the use of improved machinery is indispensable to successful farming. If he only had 5 acres of grass to cut he would have a mowing machine, or with 15 acres of wheat he would have a reaper. He had used a spring tooth harrow and preferred it to any spike tooth harrow. For the last six years he had used a wheel cultivator, and found it to work well, but in a small area he preferred a one-horse cultivator, because it will work close to the corn. The Malta shovel plow is a good implement, and the one horse drag is a good thing. The best machinery is the cheapest, and while we should strike the happy medium by not having too much we may lose by not having something we need.

R. Harris Archer thought that in three years, on account of the scarcity of labor, every body's wheat will be cut with a self-binder.

Thomas Lochary said farmers should endeavor to get the best machinery and implements. With a little patch of wheat and rough ground, a man has no business with a reaper. Where the ground is suitable you can generally save $1\frac{1}{2}$ bushels to the acre by using a reaper instead of cradles. Good implements save time, muscle, as well as prevent bad feeling and swearing. He had found the improved implements strong and durable.

Bennett H. Barnes was also in favor of improved machinery. Every year, wheat is more or less down, and a reaper will save it.

B. Silver, Jr., says it pays to use the best and most improved machinery. Taking one year with another, it pays to have a reaper, but if wheat would stand up straight would prefer cutting it with cradles. Last year, he cut 60 acres with cradles in four days, at a cost of \$44. The improvement in wheat drills has also been great. Last year he planted 200 acres of sugar corn with an Empire wheat drill. It made the rows 40 inches apart, planting two rows at a time. The fertilizer was applied with the corn.

Edward P. Moores thought farmers should take advantage of all kinds of machinery to save labor. There has been a great improvement in farming implements and in nothing more than in plows.

Harry Wilson thought farmers should keep up with the times in improved machinery. Self-binders appear to be working successfully now, but he would not think it advisable for every farmer to have one. A sulky plow, besides being comfortable for a lazy man, has this advantage, that any ordinary boy who can drive horses can work it.

R. John Rogers said a farmer should have the best improved farming implements, but no more than he actually needs. He would not have wheat cut with a cradle if he could have it cut for nothing. If he only sowed 10 acres of wheat he would have a drill. As to plows, every farmer thinks his own the best. There is, indeed, but little difference in steel plows.

Wm. Webster said, improved machinery bore the same relation to the old kinds, that improved stook bears to the old-fashioned stock. If a farmer has a machine that cannot be made to do good work, he will save by throwing it away and buying a better one. The plow is as important to the farmer as the hatchet to the carpenter or the trowel to the mason.

Judge Watters said farming could not be done now without improved machinery and it is poor economy to use inferior articles. The kind used must depend upon the character and quantity of land and the manner of farming it. Nothing has been more improved than agricultural implements, and it is now impossible to attempt to farm without keeping up with the improvements in them. The illustration Mr. Silver gave of the advantage of cutting wheat with cradles, over a reaper, was

hardly fair, because he had a large number of hands working by the year, and their labor, of course, did not cost so much as the hire of temporary hands. The time is coming when all farmers will use the self-binder. Farm work can be done cheaper by machinery than by muscular force, but farmers should avoid the expense of over-doing it.

John Moores thought all farmers ought to be provided with the best machinery they can obtain, but he would not advise any one to go into debt for it. Many farmers had laid the foundation of debt and been sold out for agricultural machinery which they could have done without. Machinery should be well taken care of. Reapers and mowers should be kept on a good board floor, in a tight house which the dust cannot penetrate.

Wm. Munnikhuysen, the President, said no reference had been made to hay tedders. Judge Watters said he had used one and thought it of great advantage where a large crop of hay is to be saved.

George E. Silver mentioned the advantage of using a circular saw to save labor.

Mr. Munnikhuysen believed in using good machinery and whatever a farmer requires. Farmers complain that prices are too high. He had recently been enabled to find out more about manufacturers' profits than he knew before, and was convinced that generally they were very small. It was only by selling a great number that it became profitable.

Mr. Geo. E. Silver suggested that as it was the President's birthday, the club extend their best wishes to Mr. Munnikhuysen for a long life and many happy returns. The motion was carried unanimously.

Resolutions of respect to the memory of the late Major Wm. H. Dallam, an honorary member of the club, were passed, and the club adjourned to meet at Mr. Johns H. Janney's, March 17th.

A JERSEY BULL SOLD FOR \$12,500.—The great value of Jersey cattle is illustrated in the recent sale of a young Jersey bull calf, only six weeks old, for \$12,500. The bull was sired by Black Prince of Hanover, dam Eurotas, and was sold by Peter C. Kellog & Co. to Messrs. Miller & Sibley, on account of Mr. A. B. Darling, proprietor of the Fifth Avenue Hotel, N. Y., who has a fine farm in New Jersey.

POULTRY HOUSE.

We find in the *Poultry Review and Stock Journal*, Washington, D. C., a well written review of the grand poultry show held in December last, in Baltimore. The writer says:

"I believe that all who were fortunate enough to be present at the Baltimore show will agree with me in saying that it was the finest display of pigeons ever seen in this country. There were four hundred and twenty-seven entries, making over eight hundred birds, and the hall was arranged with such admirable taste and good judgment that you could stand at one end and see almost every cage and its contents, at a glance."

The writer goes on to name the number of exhibits of each class and to mention some of the rarest and most remarkable birds on exhibition. By his statement it appears that a specimen of almost every known variety of pigeons were on exhibition, and was worth a journey of many miles to see. The association will hold annual exhibitions that will no doubt increase in public interest and popularity yearly.

Mr. H. F. Whitman, we are informed, has sold his pair of silver owls, that took first prize in our last show, to Mr. Edward Severn, of Hartford, Conn., for \$40, they were considered the finest birds of that class in America.

Duck Raising.

It is both economical and sensible to raise ducks. A great deal of the coarse, vegetable food used in a family, with small potatoes and a little grain is all that is required to keep a small flock in thrift the year through. Ducklings mature early in their lives; one would not feel the time passing before they are ready for market. At five or six months old, they will, with ordinary care, dress ten or twelve pounds per pair, and give besides a nice lot of feathers, which can be sold at a fair price or be used to increase the family stock of

beds and pillows. Ducks are easily kept from the shell, like chicks and poults, they are industrious foragers and thrive rapidly. Their keen appetites, capacious craws and strong digestive organs enable them to assimilate any kind of coarse or refuse food. They are at home in the stubble field, gleaned what the reaper left behind; will turn into a pasture and be contented on grass, and they are happy in a pond, or brook, or marsh, diving in the mud, searching for animal, fish, or insect food, larvæ and vegetation. They do not require an expensive domicile for their use. Being generous feeders, they grow right along when they once get a start, and their predisposition to mature early is one of the best recommendations in favor of the general cultivation of ducks for the market or table.

French Poultry.

The census shows there are 40,000,000 hens in France, not including ducks, geese, turkeys, guineas and pheasants, valued at half dollar each, an average below 16½ cts. per pound meat. One-fifth are annually marketed for the table, aggregating \$4,000,000 to the producers. The annual raising of chickens is 80,000,000, which bring in the market, \$24,000,000, or an average of 33½ cents each. Four millions a year, extra, is added for ducks, geese, turkeys, capons and poulardes. The production of eggs is estimated at 48,000,000 a year, and the total value of eggs, hens, capons, ducks, geese, turkeys and young chickens, yearly, amounts to the astonishing sum of \$80,000,000.

A vigorous hen will consume in a year about a bushel and a half of corn, or its equivalent in food of some sort. The expense can be calculated on this basis.

A CALIFORNIA farmer took two and a half ounces of wheat from the chops of one of the predatory squirrels there. The grains numbered 950, and he thinks from the number of rodents to the acre, that they get more than their share of the crop.

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